AI in Emergency Care: How Clinicians Lead Healthcare's Digital Transformation Transcript

(Transcripts are generated by AI and may contain errors)

Good morning everyone. Welcome to Good morning everyone. Welcome to Signals and Symptom podcast and today is Signals and Symptom podcast and today is an special day. Uh interestingly John an special day. Uh interestingly John Dayton is a good friend with Harvey and Dayton is a good friend with Harvey and knows Ed, knows me etc. But his journey knows Ed, knows me etc. But his journey is superb. He's actually a physician is superb. He's actually a physician first and foremost. Then he's a Stanford first and foremost. Then he's a Stanford faculty. Then he's a practicing faculty. Then he's a practicing physician. I don't know he can update physician. I don't know he can update that. And more importantly, he has a that. And more importantly, he has a fund that he is sort of uh helping other fund that he is sort of uh helping other startups to basically truly impact startups to basically truly impact healthcare reformation restructuring as healthcare reformation restructuring as we see this. So many hats that he wears we see this. So many hats that he wears and therefore I'm so excited he's here and therefore I'm so excited he's here to learn from him. It's going to be an to learn from him. It's going to be an open discussion as usual. I'm going to open discussion as usual. I'm going to go ahead with some updates and one of go ahead with some updates and one of the major updates is for my company Save the major updates is for my company Save Life AI and we got another FDA approval Life AI and we got another FDA approval done. Oh my god, it then went through.

done. Oh my god, it then went through. And we have Ed Marks again. So, we're And we have Ed Marks again. So, we're gonna go ahead and show that in a Let me gonna go ahead and show that in a Let me just show it.

just show it. Uh, give me one second. So, we actually Uh, give me one second. So, we actually got another FDA approval and that is got another FDA approval and that is just going to be insane in terms of how just going to be insane in terms of how we're going to be actually doing market we're going to be actually doing market opportunity. This is our second FDA opportunity. This is our second FDA software as medical device approval. We software as medical device approval. We have two more in application which we have two more in application which we are expecting somewhere between the next are expecting somewhere between the next 30 to n 60 days to get approval and then 30 to n 60 days to get approval and then this year we're going to have a batch of this year we're going to have a batch of four more FDAs at least depending on how four more FDAs at least depending on how much I can actually figure out uh and much I can actually figure out uh and one of the days we're going to go from one of the days we're going to go from there. So massive update from save life there. So massive update from save life AI. Thanks to my team they worked AI. Thanks to my team they worked amazing on all of this going with other amazing on all of this going with other a framework. So this is released from a framework. So this is released from Google research heel a framework for Google research heel a framework for health equity assessment of machine health equity assessment of machine learning performance and this is so learning performance and this is so important that we actually have to talk important that we actually have to talk about health equity and this is really about health equity and this is really why me and you know Harvey are why me and you know Harvey are interested. Harvey is going to come back interested. Harvey is going to come back in a minute and he's going to give you in a minute and he's going to give you international perspective on things that international perspective on things that both in terms of they are running faster both in terms of they are running faster than US because of issues of regulation than US because of issues of regulation and everything here in US is concerned and everything here in US is concerned but more importantly the promise of AI but more importantly the promise of AI the minute the tokens become cheaper the minute the tokens become cheaper we're going to see basically again as we we're going to see basically again as we keep calling demonetization and keep calling demonetization and democratization of intelligence and at democratization of intelligence and at some point in time we're going to see some point in time we're going to see this and health equity is extremely this and health equity is extremely extremely important as we go along in extremely important as we go along in terms of this. And uh Harvey's Harvey, terms of this. And uh Harvey's Harvey, where are you right now?

where are you right now? >> I am in the jungles of Amazon. And >> I am in the jungles of Amazon. And you're going to get a kick out of this. you're going to get a kick out of this.

The reason I'm able to stream is they The reason I'm able to stream is they actually have Starlink or a portion of actually have Starlink or a portion of Starlink here, which is crazy.

Starlink here, which is crazy. >> Insane. And this is where the real issue >> Insane. And this is where the real issue comes in that we are not only comes in that we are not only democratizing and demonetizing democratizing and demonetizing intelligence, we are also democratizing intelligence, we are also democratizing connectivity in the jungles of Amazon.

connectivity in the jungles of Amazon. Uh where Avi comes from. He looks like Uh where Avi comes from. He looks like uh an animal. I'm just messing with you, uh an animal. I'm just messing with you, but but but he's going to show some Do you have some he's going to show some Do you have some pictures? Uh we love to share that pictures? Uh we love to share that because I would love to see what's going because I would love to see what's going on in the jungle right now.

on in the jungle right now. >> Oh, it's fun. >> Oh, it's fun. >> Yeah. We'll we'll I I'll definitely >> Yeah. We'll we'll I I'll definitely we'll put them we'll add them to the we'll put them we'll add them to the show notes.

show notes. >> Okay, perfect. We'll just add them. >> Okay, perfect. We'll just add them. Another thing that uh Google research Another thing that uh Google research release is health specific emittings for release is health specific emittings for dermatology and pathology. Now you have dermatology and pathology. Now you have to understand that we have worked a lot to understand that we have worked a lot on clinical LLMs. Actually I'm out of on clinical LLMs. Actually I'm out of the dermatology and pathology the dermatology and pathology specifically and one of the biggest specifically and one of the biggest technical issue producing LLM is technical issue producing LLM is essentially causing what we call uh you essentially causing what we call uh you know adding you know embeddings know adding you know embeddings embeddings is the first problem to solve embeddings is the first problem to solve then you go into intelligence and they then you go into intelligence and they actually did a very good paper on this actually did a very good paper on this that how we're going to go ahead and that how we're going to go ahead and generate embeddings from tumor to no generate embeddings from tumor to no tumor etc. So go ahead and read this tumor etc. So go ahead and read this paper. It's fascinating if you're paper. It's fascinating if you're looking at it. Empowering surgeons for looking at it. Empowering surgeons for integrated synthetic data solution integrated synthetic data solution mastering complex clinical scenarios and mastering complex clinical scenarios and we talked about this last week or with we talked about this last week or with uh Harvey and we're going to come to the uh Harvey and we're going to come to the digital twin part and this is really digital twin part and this is really when the word synthetic data comes in when the word synthetic data comes in synthetic is pure synthetic. is not like synthetic is pure synthetic. is not like twinning someone's original data but the twinning someone's original data but the conceptually it remains the same that conceptually it remains the same that you actually use synthetic data to you actually use synthetic data to actually create complex scenarios and we actually create complex scenarios and we do this all the time we go through do this all the time we go through custom workflows now and then we create custom workflows now and then we create all of this synthetic data as a matter all of this synthetic data as a matter of fact memoite uh you know uh we did of fact memoite uh you know uh we did not use it as training but at least uh not use it as training but at least uh FDA has provided FDA has provided FDA has provided FDA has provided synthetic data of mamograms that we use synthetic data of mamograms that we use for our testing So synthetic data is for our testing So synthetic data is going to become part and parcel and it going to become part and parcel and it is very important to look at these is very important to look at these complex clinical scenarios to produce complex clinical scenarios to produce synthetic data because all the edge synthetic data because all the edge cases cannot be covered with real data.

cases cannot be covered with real data. Reinforcement learning for LLM accuracy Reinforcement learning for LLM accuracy in reasoning and classification of in reasoning and classification of radiology reports and this is very radiology reports and this is very important to use reinforcement learning important to use reinforcement learning itself because what it does is that it itself because what it does is that it really does improve LLM accuracy. uh it really does improve LLM accuracy. uh it is there's a whole process. It's very is there's a whole process. It's very hard to put it into production. You have hard to put it into production. You have to be very careful. But again, it's an to be very careful. But again, it's an amazing fascinating read. If anyone's amazing fascinating read. If anyone's interested in understanding interested in understanding reinforcement learning specifically for reinforcement

learning specifically for uh essentially clinical reports, uh this uh essentially clinical reports, uh this is Harvey's favorite topic. Harvey, I is Harvey's favorite topic. Harvey, I don't know if you looked at it, but this don't know if you looked at it, but this is actually one of the guiding is actually one of the guiding principles that I saw. I'm going to send principles that I saw. I'm going to send it to you. I know you're in Amazon and it to you. I know you're in Amazon and you haven't probably looked at it but you haven't probably looked at it but this guiding principles assessment this guiding principles assessment methods life cycle staging oversight methods life cycle staging oversight mechanisms was beautifully written in mechanisms was beautifully written in terms of how AI governance need to be terms of how AI governance need to be established especially now that FDA said established especially now that FDA said I don't know how to regulate it I don't I don't know how to regulate it I don't care about CDSS you figure it out and care about CDSS you figure it out and we're going to talk to John about it in we're going to talk to John about it in a minute what his experience been in a minute what his experience been in terms of CDSS and FDA and everything key terms of CDSS and FDA and everything key concepts in vision language and concepts in vision language and reasoning employerities. This is a very reasoning employerities. This is a very beautiful research paper. Concept VLM beautiful research paper. Concept VLM achieved state-of-the-art result only achieved state-of-the-art result only using 1% of original data.

using 1% of original data. >> Insane. >> Insane. >> Insane. >> Yeah. >> Yeah. >> Yeah. >> Do you understand like where the com and >> Do you understand like where the com and this is so true by the way. I used to this is so true by the way. I used to order like a million images and now I'm order like a million images and now I'm getting the same results with 10,000 getting the same results with 10,000 images. And it it the way that the images. And it it the way that the structure is going it is going to be structure is going it is going to be insane. And one of the things that chess insane. And one of the things that chess actually is going to come in a research actually is going to come in a research project from us because we got IRB project from us because we got IRB you're going to see that coming through you're going to see that coming through our social feeds as well. So keep our social feeds as well. So keep following that that how we are also following that that how we are also utilizing some of these concepts already utilizing some of these concepts already in production. We're just testing final in production. We're just testing final testing and then releasing it. Uh testing and then releasing it. Uh efficient image segmentation in the era efficient image segmentation in the era of mamba and foundation models. Mamba is of mamba and foundation models. Mamba is a very different architecture than a a very different architecture than a transformer model. It does of course transformer model. It does of course inherit a lot of things but what the inherit a lot of things but what the beauty of this program was that if you beauty of this program was that if you look through that CNN and emergence of look through that CNN and emergence of this particular CAN which honestly I this particular CAN which honestly I don't know it was a very technical paper don't know it was a very technical paper but at the end of the day they were able but at the end of the day they were able to compare SAM which is segment anything to compare SAM which is segment anything model with CANs and then it's it's an model with CANs and then it's it's an amazing read I'm not going to be using amazing read I'm not going to be using it but somebody who's actually it but somebody who's actually clinically and technically inclined clinically and technically inclined should use it. uh automated extraction should use it. uh automated extraction very very important this is becoming very very important this is becoming part and parcel of last time we part and parcel of last time we discussed visit an AI based visit discussed visit an AI based visit navigator it is going to be truly navigator it is going to be truly transformative as we go along uh transformative as we go along uh electronic health record amid the rise electronic health record amid the rise of generating generative AI and this is of generating generative AI and this is again is going to be a core topic that again is going to be a core topic that we're going to discuss with our friend we're going to discuss with our friend John Dr. Dayton and then understand his John Dr. Dayton and then understand his journey and his in his his sort of journey and his in his his sort of approach and you know even not just approach and you know even not just basically you know understanding the basically you know understanding the problems but what is he funding from his problems but what is he funding from his VC for this particular problem as we go VC for this particular problem as we go along sub this is so good uh subsp along sub this is so good uh subsp specialty specific foundation model so specialty specific foundation model so there is a foundation model that cares there is a foundation model that cares of everything from finance to healthcare of everything from finance to healthcare to this which is GPS and claw pods and to this which is GPS and claw pods and everything. Then you have foundation everything. Then you have foundation model for radiology that can take care model for radiology that can take care of CT, MRI, ultrasound X-rays. And then of CT, MRI, ultrasound X-rays. And then you have specific foundation models for you have specific foundation models for this particular niche. And this is this particular niche. And this is something that we have been working on something that we have been working on

right for example right now we talked right for example right now we talked about chest X-ray mamo side we actually about chest X-ray mamo side we actually on the back end even there's no FDA on the back end even there's no FDA approval and we cannot show those approval and we cannot show those results but at the back end there's results but at the back end there's essentially a mamogram essentially a mamogram subsp specialty specific foundation subsp specialty specific foundation model is working. we can give so much model is working. we can give so much more results but FDA hasn't approved it more results but FDA hasn't approved it so we can't show it but at the end of so we can't show it but at the end of the day this is clearly our pattern and the day this is clearly our pattern and this is again uh very important for this is again uh very important for people who are trying to understand how people who are trying to understand how GI pathology is going to work in the GI pathology is going to work in the future uh this actually includes both future uh this actually includes both you know so that's the idea behind it you know so that's the idea behind it you have pathology radiology uh you have pathology radiology uh endoscopy in one foundation model and endoscopy in one foundation model and the idea behind it is that it has also the idea behind it is that it has also from clinical information and that from clinical information and that foundation model not only can foundation model not only can cumulatively do multimodal thinking but cumulatively do multimodal thinking but also do cumulative reasoning and if you also do cumulative reasoning and if you use a whole big massive foundation model use a whole big massive foundation model there's a lot of hallucinations there's there's a lot of hallucinations there's actually a mirage effect they don't even actually a mirage effect they don't even look at godamn images so this is really look at godamn images so this is really what the wave of the future is going to what the wave of the future is going to be we're going to have 200 300 of these be we're going to have 200 300 of these specialty specific foundation models and specialty specific foundation models and then we're going to serve this agent then we're going to serve this agent clinic a beautiful benchmark as you know clinic a beautiful benchmark as you know I love benchmarks I do constantly check I love benchmarks I do constantly check benchmarks. Please review this benchmarks. Please review this benchmark. It is fantastic. And then a benchmark. It is fantastic. And then a digital twin for tracking and digital twin for tracking and forecasting glycemia with spec septic forecasting glycemia with spec septic patients in ICU. Uh again we talked patients in ICU. Uh again we talked about Harvey uh yes last time please about Harvey uh yes last time please review this paper. It's extremely review this paper. It's extremely amazing. Stanford just released amazing. Stanford just released according to this paper an open source according to this paper an open source but I cannot find it. uh but anyways but I cannot find it. uh but anyways they have released a multi a global they have released a multi a global multimodal data set uh according to the multimodal data set uh according to the paper it is open source or will be open paper it is open source or will be open source but that's just a truly amazing source but that's just a truly amazing paper they have done data sources paper they have done data sources extraction annotation global extraction annotation global recruitment beautifully done uh please review this beautifully done uh please review this they actually have a massive uh this is they actually have a massive uh this is actually released today so I haven't actually released today so I haven't been able to fully review this but uh been able to fully review this but uh what they have done is that they are what they have done is that they are actually now producing a system in which actually now producing a system in which people can now contribute deidentified people can now contribute deidentified data etc. all of that. So Stanford uh I data etc. all of that. So Stanford uh I don't know John maybe you know more don't know John maybe you know more about it but this is like truly about it but this is like truly fascinating stuff. Um and then of course fascinating stuff. Um and then of course lastly mapping AI startup investment lastly mapping AI startup investment innovations in healthcare using five a innovations in healthcare using five a five tier AI system complexity five tier AI system complexity framework. Um again I I don't know if framework. Um again I I don't know if you were able to review this as well but you were able to review this as well but uh we're going to talk about this. So uh we're going to talk about this. So coming back to John, John again coming back to John, John again extremely grateful you're here today.

extremely grateful you're here today. First take us through your journey uh First take us through your journey uh your life journey in terms of from a your life journey in terms of from a physician to faculty to entrepreneurship physician to faculty to entrepreneurship to I don't know V fund VC fund founder.

to I don't know V fund VC fund founder. If I'm saying something wrong please If I'm saying something wrong please please please please apologize. apologize.

apologize. >> Yeah first of all thanks so much for for >> Yeah first of all thanks so much for for having me on the show. It's great to having me on the show. It's great to connect with you guys and thanks for the connect with you

guys and thanks for the litter view that I obviously have a lot litter view that I obviously have a lot of articles I need to be reading in the of articles I need to be reading in the next in the next week or so. Fascinating next in the next week or so. Fascinating stuff there. Um just a little bit about stuff there. Um just a little bit about background for myself. I'm an emergency background for myself. I'm an emergency physician. I I live in Utah. Um I physician. I I live in Utah. Um I started practicing in Utah initially and started practicing in Utah initially and um in addition to working in emergency um in addition to working in emergency medicine, I like to be involved in medicine, I like to be involved in innovation. So I um I was involved in innovation. So I um I was involved in getting a Utah chapter for society getting a Utah chapter for society physician entrepreneurs off the ground.

physician entrepreneurs off the ground. And so that was that was a a really fun And so that was that was a a really fun experience because we would feature experience because we would feature local doctors that have brought products local doctors that have brought products to market. We'd host pitch events and to market. We'd host pitch events and this was all pre-COVID where you know this was all pre-COVID where you know we'd have these big gatherings. Um I we'd have these big gatherings. Um I really enjoyed doing that. I I had really enjoyed doing that. I I had transitioned to working up at the transitioned to working up at the University of Utah and uh where I was University of Utah and uh where I was doing research on innovative delivery doing research on innovative delivery models looking at freestanding ERS models looking at freestanding ERS particularly um those built by academic particularly um those built by academic centers what those kind of metrics were centers what those kind of metrics were looking like and um it you know uh looking like and um it you know uh obviously COVID changed everything um obviously COVID changed everything um fast forward a couple years and I was fast forward a couple years and I was working on the Navajo reservation which working on the Navajo reservation which was a great experience. I felt really was a great experience. I felt really useful, but it was a little bit of a a useful, but it was a little bit of a a grind because I'd drive um you know from grind because I'd drive um you know from from my home at Salt Lake City about from my home at Salt Lake City about eight hours, work on the Navajo eight hours, work on the Navajo reservation for I'd do like five or six reservation for I'd do like five or six night shifts, then I'd drive home and night shifts, then I'd drive home and try to catch up in what on my sleep and try to catch up in what on my sleep and try to binge parent and and I really try to binge parent and and I really enjoyed it.

enjoyed it. um with everything co changing um with everything co changing everything. I thought, you know, I've everything. I thought, you know, I've been looking at doing innovation and been looking at doing innovation and I've been trying to figure out how I'm I've been trying to figure out how I'm going to I'm going to add that to my going to I'm going to add that to my practice and, you know, playing around practice and, you know, playing around with the idea that, you know, ER with the idea that, you know, ER doctors, we're famous for burning out doctors, we're famous for burning out and maybe this is something that will and maybe this is something that will give me some career longevity and kind give me some career longevity and kind of help me find a unique niche. And so I of help me find a unique niche. And so I was looking at MBA programs and one of was looking at MBA programs and one of my friends who who was at Stanford said, my friends who who was at Stanford said, you know, we're just starting this you know, we're just starting this innovation fellowship. Why don't you innovation fellowship. Why don't you come join us? and very non-traditional come join us? and very non-traditional uh fellow. I'd been you know practicing uh fellow. I'd been you know practicing for for over a decade but I went back to for for over a decade but I went back to school decided what what a cool school decided what what a cool experience. So I was in Palo Alto for experience. So I was in Palo Alto for two years. Uh I did the innovation two years. Uh I did the innovation fellowship and then part of that um fellowship and then part of that um program was you can do the biioesign program was you can do the biioesign faculty fellowship on top of that.

faculty fellowship on top of that. >> Um and they gave me money to pursue an >> Um and they gave me money to pursue an MBA and so phenomenal fellowship. I MBA and so phenomenal fellowship. I recommend it to anybody um particularly recommend it to anybody um particularly the folks looking at business um in the folks looking at business um in medicine innovation in medicine and medicine innovation in medicine and people say you know maybe I'm going to people say you know maybe I'm going to do something in VC or maybe I want to be do something in VC or maybe I want to be a chief medical officer or you know I'm a chief medical officer or you know I'm I'm going to do a traditional path but I I'm going to do a traditional path but I but I want to add um I want to be an but I want to add um I want to be an entrepreneur and build things inside the entrepreneur and build things inside the system. So that was a phenomenal system. So that was a phenomenal experience. So luckily I'm I'm still on experience. So luckily I'm I'm still on faculty at Stanford because I've been faculty at Stanford because I've been

involved with some research. I still go involved with some research. I still go back there and do shifts. Um, but now back there and do shifts. Um, but now I'm uh full-time in Salt Lake City with I'm uh full-time in Salt Lake City with Inter Mountain Health and so I do 12 Inter Mountain Health and so I do 12 trips a month, but as Janet uh trips a month, but as Janet uh referenced, I I'm in the process of referenced, I I'm in the process of raising a venture fund. I've been raising a venture fund. I've been involved in VC for the last couple involved in VC for the last couple years. Uh, I'm an I'm a LP or limited years. Uh, I'm an I'm a LP or limited partner investor in partner investor in >> uh a venture um firm called Springtide, >> uh a venture um firm called Springtide, their first three funds and then a their first three funds and then a venture partner uh for their second and venture partner uh for their second and third fund as well. and that um I'm also third fund as well. and that um I'm also an adviser for Inter Mountain Ventures, an adviser for Inter Mountain Ventures, particularly in the acute care space as particularly in the acute care space as far as finding interesting companies, far as finding interesting companies, talking about what we need in the ER, talking about what we need in the ER, talking about what's out there that's talking about what's out there that's going to help Inter Mountain be uh going to help Inter Mountain be uh innovative and on top of things. And so innovative and on top of things. And so th that's been a really interesting th that's been a really interesting journey. went back to my soap days journey. went back to my soap days society physician entrepreneurs as as society physician entrepreneurs as as part of that setting up all these uh part of that setting up all these uh pitch events. I ended up meeting the pitch events. I ended up meeting the local uh tech transfer experts, local local uh tech transfer experts, local VCs, local um angel investors and I was VCs, local um angel investors and I was invited to be part of Salt Lake City invited to be part of Salt Lake City Angels. That was a really unique Angels. That was a really unique experience because about 30 to 40% of experience because about 30 to 40% of what they get as far as new companies what they get as far as new companies are healthcare based. So me and two are healthcare based. So me and two other physicians that were part of that other physicians that were part of that group um we did a lot of digging saying group um we did a lot of digging saying is you know is this a big enough need?

is you know is this a big enough need? Is this something that's going to grow? Is this something that's going to grow? Is this something that that will work?

Is this something that that will work? And then ended up leveraging those And then ended up leveraging those connections from working as an angel to connections from working as an angel to to working in VC. And so now I'm kind of to working in VC. And so now I'm kind of full circle where I've been involved but full circle where I've been involved but this is the first chance to build my this is the first chance to build my own.

own. own. I'm I'm in the process of raising a $5 I'm I'm in the process of raising a $5 million fund, me and my partner Jamie million fund, me and my partner Jamie Edwards, and and our thesis is where I'm Edwards, and and our thesis is where I'm a physician that has experience in a physician that has experience in building effective pilots and regulatory building effective pilots and regulatory strategy and where he's an operator with strategy and where he's an operator with a background as an entrepreneur and a background as an entrepreneur and residence for startup health and with an residence for startup health and with an operator in the teleahalth and the RPM operator in the teleahalth and the RPM space. we really focused on helping space. we really focused on helping early companies um make sure their idea early companies um make sure their idea is successful and then he's helped is successful and then he's helped them move along with distribution and move along with distribution and coaching. So we're still raising we're coaching. So we're still raising we're just over two and a half of our five just over two and a half of our five million that we're wanting to raise.

million that we're wanting to raise. We're starting to deploy that and our We're starting to deploy that and our first um investment and one that's in first um investment and one that's in the pipeline. Both very interesting AI the pipeline. Both very interesting AI companies and so uh great great timing companies and so uh great great timing to to talk about that. I appreciate you to to talk about that. I appreciate you guys having me on the having me on the guys having me on the having me on the show.

show. show. >> Absolutely. Thank you so much for giving >> Absolutely. Thank you so much for giving this amazing journey. I'm going to let this amazing journey. I'm going to let uh uh Harvey go first because he's in uh uh Harvey go first because he's in Amazon and Starling may actually not go Amazon and Starling may actually not go through this. Um so u Harvey um this is through this. Um so u Harvey um this is amazing journey. I have so many amazing journey. I have so many questions but I'll let you go first.

questions but I'll let you go first. >> Well John thanks for coming buddy. Uh >> Well John thanks for coming buddy. Uh I'm biased when I say I think ER doctors I'm biased when I say I think ER doctors are pretty amazing people and I'm glad are pretty amazing people and I'm glad to see that I have a fellow amazing ER to see that I have a fellow amazing ER doctor with me.

doctor with me. >> Not not better than neurologists. No >> Not not better than neurologists. No way. way. way. >> Go ahead. >> Go ahead. >> Well, we'll we'll let John's resume >> Well, we'll we'll let John's resume speak for itself uh over yours, but I'm speak for itself uh over yours, but I'm kidding there, buddy.

kidding there, buddy. >> I'm joking. >> I'm joking. >> No, but but seriously, uh John, I >> No, but but seriously, uh John, I appreciate all the stuff you did in the appreciate all the stuff you did in the freestanding and you and I's freestanding and you and I's relationship and and my always I always relationship and and my always I always like asking the question, why? Why do like asking the question, why? Why do you do what you do? You know, is it the you do what you do? You know, is it the AI healthcare? Is it the improvement of AI healthcare? Is it the improvement of health? Is it the technology? What what health? Is it the technology? What what is it, John, that's pushing you to do is it, John, that's pushing you to do all these things?

all these things? >> Yeah, you know, it it's a great >> Yeah, you know, it it's a great question. I I think it's kind of a question. I I think it's kind of a combination of being a physician in combination of being a physician in general and then being an emergency general and then being an emergency physician as well. I think we're kind of physician as well. I think we're kind of self- selected to trying to help people self- selected to trying to help people get better. Um, and then in the ER, we get better. Um, and then in the ER, we see it's kind of a, you know, microcosm see it's kind of a, you know, microcosm of the health system. We see the of the health system. We see the emergencies from every specialty, but emergencies from every specialty, but we're also the safety net. So if we're also the safety net. So if something else is failing in the system, something else is failing in the system, we see it in the ER. I so and so I think we see it in the ER. I so and so I think early on looking at you know different early on looking at you know different emergency department options and saying emergency department options and saying hey you know not every hospital needs a hey you know not every hospital needs a plastic surgeon and a neurosurgeon and plastic surgeon and a neurosurgeon and >> and a stroke center and so freestandings >> and a stroke center and so freestandings work very well kind of along the hub and work very well kind of along the hub and spoke model. You know we bring care to spoke model. You know we bring care to this this network. We leverage a lot of this this network. We leverage a lot of teleaalth and it's a a smart way to to teleaalth and it's a a smart way to to bring several different kinds of acute bring several different kinds of acute care to a smaller community. And so I I care to a smaller community. And so I I really I really enjoyed that. At the really I really enjoyed that. At the time I looked at, you know, between the time I looked at, you know, between the private freestandings and the academics.

private freestandings and the academics. You know, the patients tend to tend to You know, the patients tend to tend to be happier because they get in quicker.

be happier because they get in quicker. You know, we feel like we utilize those You know, we feel like we utilize those resources well. And so that was some of resources well. And so that was some of some of the initial research I was doing some of the initial research I was doing is figuring out, all right, is this a is figuring out, all right, is this a safe model? Can we do it? and and and safe model? Can we do it? and and and ASAP um gave me the opportunity to lead ASAP um gave me the opportunity to lead lead a task force on that to say, you lead a task force on that to say, you know, we we we should standardize this.

know, we we we should standardize this. You know, just like we're talking about You know, just like we're talking about AI right now with guardrails and AI right now with guardrails and standards like at the time it's like if standards like at the time it's like if if we're going to have freestanding EDs, if we're going to have freestanding EDs, how do we make sure that they represent how do we make sure that they represent the best of emergency medicine, then the best of emergency medicine, then they're not just glorified urgent cares, they're not just glorified urgent cares, that we have board-certified doctors that we have board-certified doctors there. And so, um, Harvey was on that there. And so, um, Harvey was on that task force with me and we had a bunch of task force with me and we had a bunch of academic docs, a bunch of folks in the academic docs, a bunch of folks in the private sector and, you know, kind of private sector and, you know, kind of figured out, all right, let's let's have figured out, all

right, let's let's have emergency care. Let's not water it down.

emergency care. Let's not water it down. Let's make sure we address what we're Let's make sure we address what we're doing. And so, um, that that that was an doing. And so, um, that that that was an interesting thing to do. And then and interesting thing to do. And then and and as uh and as uh I kind of changed my my focus as far as I kind of changed my my focus as far as research um with artificial research um with artificial intelligence. Obviously, I did not dive intelligence. Obviously, I did not dive in um to the to the length that Harvey in um to the to the length that Harvey had, but I realized I I'm going to need had, but I realized I I'm going to need to know how this works if I'm gonna if to know how this works if I'm gonna if I'm going to utilize it in practice. And I'm going to utilize it in practice. And so, I did some executive education so, I did some executive education through through MIT and then I did the through through MIT and then I did the certificate through the American Boards certificate through the American Boards of AI and Medicine. I think Harvey did of AI and Medicine. I think Harvey did that as well. But I realized, you know, that as well. But I realized, you know, even though um I don't I don't know how even though um I don't I don't know how to code, I can still be a physician and to code, I can still be a physician and figure out what can I do with AI and figure out what can I do with AI and what can't I do and and how do I discern what can't I do and and how do I discern the difference and how do I stay stay on the difference and how do I stay stay on top of that. So that's that's been a top of that. So that's that's been a major interest to me. I've written some major interest to me. I've written some papers with some colleagues at Stanford papers with some colleagues at Stanford and then one of the things I I um very and then one of the things I I um very interested in is is knowledge interested in is is knowledge translation. And so, you know, we're at translation. And so, you know, we're at a point where if I'm not I'm not trying a point where if I'm not I'm not trying to be disparaging, but by the time to be disparaging, but by the time something gets in a textbook, it's something gets in a textbook, it's almost outdated. And so, um, try to look almost outdated. And so, um, try to look at what are the resources that are at what are the resources that are online, what are the communities that online, what are the communities that are meeting, who are the who are the are meeting, who are the who are the experts in the space that we can follow.

experts in the space that we can follow. And so, I I built a big upskilling, uh, And so, I I built a big upskilling, uh, document on on LinkedIn saying, "Hey, if document on on LinkedIn saying, "Hey, if you're wanting to be on top of AI, here you're wanting to be on top of AI, here are some resources for you. And if are some resources for you. And if you're looking at business, you know, in you're looking at business, you know, in medicine, here are some resources, some medicine, here are some resources, some traditional like fellowships, some traditional like fellowships, some non-traditional like like conferences non-traditional like like conferences and, you know, uh online online groups and, you know, uh online online groups and and Slack channels. And so there a and and Slack channels. And so there a lot of great knowledge coming out of lot of great knowledge coming out of these these groups. And so that's that's these these groups. And so that's that's where I've been with kind of my focus of where I've been with kind of my focus of um research and knowledge translation um research and knowledge translation and kind of helping build uh trying to and kind of helping build uh trying to figure out the best way to to provide figure out the best way to to provide care.

care. care. >> Got it. So number one you guys may be >> Got it. So number one you guys may be able to see the screen this is cloud able to see the screen this is cloud code working right now uh coding as we code working right now uh coding as we speak uh these are all the different speak uh these are all the different projects projects projects uh you know personal injury clinical ops uh you know personal injury clinical ops tabber tabber is testing data tabber tabber is testing data benchmarking and of course auto research benchmarking and of course auto research this is codeex I just want to make sure this is codeex I just want to make sure that everyone understands that coding is that everyone understands that coding is no longer no longer as a skill so think of coding as a task as a skill so think of coding as a task software engineering is on top of it and software engineering is on top of it and then product engineering is on top of it then product engineering is on top of it and then what I'm what what I'm doing is and then what I'm what what I'm doing is that I have completely removed coding as that I have completely removed coding as a task as a matter of fact I've fired a task as a matter of fact I've fired 50% of my company because they did not 50% of my company because they did not understand that coding as a task is gone understand that coding as a task is gone we're moving towards software we're moving towards software engineering which is also going to be engineering which is also going to be done in the next two months and then done in the next two months and then we're going to go to product engineering we're going to go to product engineering which I believe is going to be done in which I believe is going to be done in four four to five months So

we are four four to five months So we are witnessing witnessing witnessing an evolution. I just want to make sure an evolution. I just want to make sure that John of course not everyone needs that John of course not everyone needs to be a coder. Not everyone needs to to be a coder. Not everyone needs to understand this. But more importantly understand this. But more importantly people need to understand that things people need to understand that things are moving so fast and physicians who are moving so fast and physicians who are thinking oh I don't know coding.

are thinking oh I don't know coding. Should I get into it? That's no longer a Should I get into it? That's no longer a problem. problem. problem. >> Bring your ideas to people like me.

>> Bring your ideas to people like me. We're happy to you know talk to him and We're happy to you know talk to him and maybe present it to John and he's maybe present it to John and he's probably going to fund it. Uh again, I'm probably going to fund it. Uh again, I'm gonna I apologize. I needed to show this gonna I apologize. I needed to show this that people understand that physicians that people understand that physicians are doing coding are doing coding on a massive scale now. Like literally, on a massive scale now. Like literally, this ran all night by the way.

this ran all night by the way. >> So, it created a whole module for me >> So, it created a whole module for me overnight and now I'm just auditing from overnight and now I'm just auditing from different coders and then I'm going to different coders and then I'm going to present it to my developers and say present it to my developers and say launch it. So, just it's insane, John.

launch it. So, just it's insane, John. By the way, By the way, >> that's a it's a huge point though >> that's a it's a huge point though because I think looking at AI on some of because I think looking at AI on some of these tools in general, I think there's, these tools in general, I think there's, you know, some some nervousness, you you know, some some nervousness, you know, some of our colleagues or there's know, some of our colleagues or there's something that like there there's something that like there there's because they think, oh, I don't know how because they think, oh, I don't know how to do this. I can't jump in. And I and I to do this. I can't jump in. And I and I think one of the great things of these think one of the great things of these with these tools is it's really going to with these tools is it's really going to lower the barrier for physicians lower the barrier for physicians building things that that improve building things that that improve medicine.

medicine. medicine. I I look, you know, back in the the mid I I look, you know, back in the the mid the mid2010s, I I built a medical the mid2010s, I I built a medical education company and it was it was a education company and it was it was a big lift because at the time I thought, big lift because at the time I thought, you know, I got to build this website. I you know, I got to build this website. I want physicians to get on there and rate want physicians to get on there and rate their favorite educational resources.

their favorite educational resources. Um, and I ended up going through like Um, and I ended up going through like three different developers trying to three different developers trying to build it out. And now I look at this and build it out. And now I look at this and like this is something I could have like this is something I could have probably vibe coded in a weekend. And um probably vibe coded in a weekend. And um and but that but that's something that and but that but that's something that keeps physicians from saying well I I keeps physicians from saying well I I can't build this solution or I can't can't build this solution or I can't build this improvement. And really build this improvement. And really that's that's how we improve healthcare that's that's how we improve healthcare because we see the pain points and we're because we see the pain points and we're the best position to say hey this is the best position to say hey this is something that needs to be done to you something that needs to be done to you know advance you know whatever process know advance you know whatever process we're trying to fix.

we're trying to fix. >> Yeah. >> Yeah. >> Yeah. >> That's what this seems like. Go ahead. >> That's what this seems like. Go ahead. >> No no nobody. Uh no go ahead and then >> No no nobody. Uh no go ahead and then after you go ahead. So that's one of the after you go ahead. So that's one of the things that you have to understand in things that you have to understand in the future and we're going to talk about the future and we're going to talk about it once we go from the mission to it once we go from the mission to production to VC is that where's the production to VC is that where's the mode and save life AI that's what it mode and save life AI that's what it brings

like two FDAs highress cyber brings like two FDAs highress cyber security framework certified global data security framework certified global data integration through particle health integration through particle health health gorilla all of this combining health gorilla all of this combining into a full vertical stack of uh into a full vertical stack of uh clinical radiological and everything not clinical radiological and everything not to toot my own horn but again what we to toot my own horn but again what we are trying to do over here is teach are trying to do over here is teach every physician because that's where our every physician because that's where our goal is to present to the board member goal is to present to the board member like Ed Marks and the VC fund like John like Ed Marks and the VC fund like John better so we can move this needle better so we can move this needle forward faster as Harvey continuously forward faster as Harvey continuously saying that why is Singapore and Dubai saying that why is Singapore and Dubai is doing better than US I mean they is doing better than US I mean they should I mean good glad to do that but should I mean good glad to do that but Harvey go ahead I'm sorry Harvey go ahead I'm sorry >> yeah so I'm just going to echo what John >> yeah so I'm just going to echo what John and actually you're saying the fact that and actually you're saying the fact that We can now show an MVP and say to the VC We can now show an MVP and say to the VC or the hospital, hey, this is how it or the hospital, hey, this is how it works. Now, my favorite phrase is we works. Now, my favorite phrase is we don't know what we don't know. Example, don't know what we don't know. Example, in the 22 when I wrote CHBT healthcare, in the 22 when I wrote CHBT healthcare, people like Harvey, what the hell are people like Harvey, what the hell are you talking about health? Like, I don't you talking about health? Like, I don't understand. Fast forward a couple months understand. Fast forward a couple months ago, Open AI now has ch health as an ago, Open AI now has ch health as an official product. Another example when official product. Another example when generative AI started becoming a thing generative AI started becoming a thing that in 23 I started showing discharge that in 23 I started showing discharge instructions using comic strips using uh instructions using comic strips using uh cartoons and converting and helping cartoons and converting and helping hospitals and children hospitals how to hospitals and children hospitals how to create this uh moat. Fast forward when create this uh moat. Fast forward when we started having um more clones as it we started having um more clones as it you know creating an item for NASA so we you know creating an item for NASA so we could do a edge technology doctor to be could do a edge technology doctor to be on the shuttle to sorry to be on the on the shuttle to sorry to be on the moon and eventually Mars and moon and eventually Mars and international space station leveraging international space station leveraging AI. Fast forward now we're looking at AI AI. Fast forward now we're looking at AI agents and I've created my own AI agents agents and I've created my own AI agents with all my wearables, my Woo, my iPhone with all my wearables, my Woo, my iPhone or and all that stuff and I'm creating or and all that stuff and I'm creating what a digital twin of myself and I'm what a digital twin of myself and I'm vibing coding myself and this is what I vibing coding myself and this is what I would have probably had a friend help me would have probably had a friend help me a year or two ago. Now I'm just like, a year or two ago. Now I'm just like, you know what, I think I can do it and I you know what, I think I can do it and I am. And now every morning uh Janelle got am. And now every morning uh Janelle got a kick out of this. I get a text with a kick out of this. I get a text with where I'm at, my medical, my age, my where I'm at, my medical, my age, my sleep patterns, my HRV, and and I I hate sleep patterns, my HRV, and and I I hate reading FY because I read all the time.

reading FY because I read all the time. I get a podcast. It's like a one minute I get a podcast. It's like a one minute podcast. Good morning, Harvey. You did podcast. Good morning, Harvey. You did sleep last night. Your HRV is this. You sleep last night. Your HRV is this. You needed this. Uh your vascular uh is needed this. Uh your vascular uh is getting a hit because you didn't uh do getting a hit because you didn't uh do XYZ. And then I get a full onepage like XYZ. And then I get a full onepage like one page one or two minute report. And one page one or two minute report. And I'm like, "Okay, crap. Tonight I'm going I'm like, "Okay, crap. Tonight I'm going to sleep. I'm going to exercise today to sleep. I'm going to exercise today and it's going to make a difference." and it's going to make a difference." But I'm by coding all of that. So my But I'm by coding all of that. So my point is I'm now able to go to a CEO, go point is I'm now able to go to a CEO, go to a VC and be like, "Look, here's to a VC and be like, "Look, here's here's how this works. Here's a real here's how this works. Here's a real example." example." example." >> That brings up another great point >> That brings up another great point because so many of our patients are, you because so many of our patients are, you know, kind of diying with these tools know, kind of diying with these tools and and if we're not familiar with that, and and if we're not familiar with that, we're in a situation where they're where we're in a situation where they're where they're going to say like, well, you they're going to say like, well, you know, why don't they know this? Why know, why don't they know this? Why aren't they adding it to their practice?

aren't they adding it to their practice? You know, why why can't they help help You know, why why can't they help help and utilize this? And so I'm I'm a big and utilize this? And so I'm I'm a big fan of how open evidence is is available fan of how open evidence is is available for the physician model, but it's for the physician model, but it's inevitable that someone's going to type inevitable that someone's going to type in like a chat GBT. These are my in like a chat GBT. These are my symptoms. What do I need to worry about?

symptoms. What do I need to worry about? And you know, it's like 10 years ago, And you know, it's like 10 years ago, someone would come to the ER and they someone would come to the ER and they say, "These are my symptoms. I Googled say, "These are my symptoms. I Googled it. That's this is what they said I it. That's this is what they said I needed to do." And now it's very common needed to do." And now it's very common for someone to come in and say, "I I for someone to come in and say, "I I looked on Chat GBT and these are the looked on Chat GBT and these are the labs I need." labs I need." and and and and some some physicians I and and and and some some physicians I think could like bristle at that a think could like bristle at that a little bit, but but I I kind of take the little bit, but but I I kind of take the standpoint, great, you're invested in standpoint, great, you're invested in your healthcare. Let's talk about these.

your healthcare. Let's talk about these. Let's talk about where these tests will Let's talk about where these tests will be useful. Let's talk about which ones be useful. Let's talk about which ones we do in the ER and which ones should we do in the ER and which ones should you do with your family doctor. And that you do with your family doctor. And that creates a great opportunity to say, creates a great opportunity to say, let's roll out the emergencies based on let's roll out the emergencies based on your concern here. Whatever, you know, your concern here. Whatever, you know, we see there we're going to treat. If we we see there we're going to treat. If we don't, sounds like we already know the don't, sounds like we already know the next step for your follow-up with your next step for your follow-up with your family doctor. And so it's it's great to family doctor. And so it's it's great to be able to have that uh transition be able to have that uh transition conversation.

conversation. conversation. >> Beautiful. This perfect transition for >> Beautiful. This perfect transition for Ed. Uh so Ed actually is very important Ed. Uh so Ed actually is very important for overall conversations because he has for overall conversations because he has served at multiple board members, chief served at multiple board members, chief CIO. Uh first Ed any question to John CIO. Uh first Ed any question to John and then what he just said um which is and then what he just said um which is very dear to you in terms of very dear to you in terms of you know you know having regular provide regular patients having regular provide regular patients access to these tools without access to these tools without unfortunately I mean the practic there's unfortunately I mean the practic there's one thing to think of gold standard and one thing to think of gold standard and full authority and trustworthiness and full authority and trustworthiness and there is one thing that we're going to there is one thing that we're going to use it what the hell are we going to use it what the hell are we going to So question to John and comments on what So question to John and comments on what he just said.

he just said. >> Yeah. Well, one of the benefits of live >> Yeah. Well, one of the benefits of live broadcasting is a surprise guest. So we broadcasting is a surprise guest. So we have Isa. Isa is a a spa dog.

have Isa. Isa is a a spa dog. >> She belongs to uh my wife, a clinician >> She belongs to uh my wife, a clinician who has a med, but she's feeling ill who has a med, but she's feeling ill today and she somehow found her way to today and she somehow found her way to my studio, but she's uh more than my studio, but she's uh more than welcome.

welcome. welcome. >> Absolutely. >> Absolutely. >> Absolutely. >> So um yeah, and she's not AI generated. >> So um yeah, and she's not AI generated. Um Um Um >> D >> D >> D are you sure Harvey is not AI generated?

are you sure Harvey is not AI generated? And the whatever he just said I want you And the whatever he just said I want you to first answer. Do we need more to first answer. Do we need more Harvey's AI generated Harveys in future?

Harvey's AI generated Harveys in future? >> Digital twins right >> Digital twins right >> go. >> go. >> go. >> I can't hear Ed. Do you hear Ed? >> I can't hear Ed. Do you hear Ed?

>> I can only hear you for some reason. I'm >> I can only hear you for some reason. I'm gonna come back. I'll be gonna come back. I'll be >> Yeah. >> Yeah.

>> Yeah. No, this is uh this is super great. And No, this is uh this is super great. And I'm just thinking about the comments I'm just thinking about the comments made early on when Jana after you went made early on when Jana after you went through kind of the literature review, through kind of the literature review, which is probably the best part for me which is probably the best part for me all the time because it's so hard to all the time because it's so hard to keep up uh with everything. And so, keep up uh with everything. And so, John, you you're obviously a very John, you you're obviously a very learned person and you've done all these learned person and you've done all these uh you know, at Stanford, you were uh you know, at Stanford, you were describing all the different programs describing all the different programs you went to at MIT and and now with the you went to at MIT and and now with the venture fund, you have all this venture fund, you have all this exposure. How how would you recommend?

exposure. How how would you recommend? So, so how does all of this translate So, so how does all of this translate down to the hospital? down to the hospital? >> Yes.

>> Yes. >> Yes. >> Right. So, I was just uh keynoting I >> Right. So, I was just uh keynoting I it's over three talks in the last over it's over three talks in the last over the weekend and until yesterday morning the weekend and until yesterday morning and it's to hospital audiences and I'm and it's to hospital audiences and I'm telling you we're all talking about this telling you we're all talking about this but they're just hey did uh was the but they're just hey did uh was the network up uh was u you know uh did we network up uh was u you know uh did we you know did we get to fill our you know did we get to fill our positions? What's a budget like? What positions? What's a budget like? What we're talking about is there's a huge we're talking about is there's a huge gap. Any recommendations like when you gap. Any recommendations like when you work with your health system and other work with your health system and other leaders or what you've seen out there, leaders or what you've seen out there, any recommendations to how do we close any recommendations to how do we close this gap between what is possible and is this gap between what is possible and is happening out there in the field and happening out there in the field and then actually making it practical on a then actually making it practical on a daily basis at our hospitals where a lot daily basis at our hospitals where a lot of the care is given.

of the care is given. >> Yeah, phenomenal question. Uh and and so >> Yeah, phenomenal question. Uh and and so to speak to that, I'll kind of lean on to speak to that, I'll kind of lean on my experience at Inter Mountain Ventures my experience at Inter Mountain Ventures and every hospital system has a set of and every hospital system has a set of goals that they're they're working on goals that they're they're working on for the next year. Um and uh for the next year. Um and uh understanding what those goals are and understanding what those goals are and then integrating AI into that can be a then integrating AI into that can be a big part. So, you know, within a mound, big part. So, you know, within a mound, a lot of it focus on this year is are a lot of it focus on this year is are things like supply chain, anything things like supply chain, anything transformative with AI. um you know transformative with AI. um you know there there's service lines that they there there's service lines that they want to improve and they want want to want to improve and they want want to get better. Um but w with these uh get better. Um but w with these uh really interesting inner mountain uh had really interesting inner mountain uh had a had a conference recently where they a had a conference recently where they just talked about innovation. They have just talked about innovation. They have a leader for AI there. They have their a leader for AI there. They have their chief tech officer there. They have chief tech officer there. They have their CFO and so where everyone's their CFO and so where everyone's aligned on saying you know this is our aligned on saying you know this is our vision. This is what we want to improve.

vision. This is what we want to improve. They they kind of have a breakdown of They they kind of have a breakdown of saying hey we want AI to you know saying hey we want AI to you know improve our education. We want to use AI improve our education. We want to use AI to address our physician shortages to address our physician shortages needs. We want AI to improve our needs. We want AI to improve our clinical workflows, need specific clinical workflows, need specific situations, and and we want uh and we situations, and and we want uh and we want AI to uh help help with patient want AI to uh help help with patient engagement and and we wanted to make our engagement and and we wanted to make our billing more effective and that sort of billing more effective

and that sort of thing. And so they've identified several thing. And so they've identified several areas where they have um where they feel areas where they have um where they feel like um different technology and new like um different technology and new tools can advance. And so that's really tools can advance. And so that's really helpful for companies that say, "Hey, helpful for companies that say, "Hey, listen. I I've got this great clinical listen. I I've got this great clinical workflow because, you know, let's say workflow because, you know, let's say maybe they're in the healthcare, maybe maybe they're in the healthcare, maybe they're in like the mental health space they're in like the mental health space and they're saying, you know, people are and they're saying, you know, people are slipping through the cracks between slipping through the cracks between their primary doctor and and psychiatry.

their primary doctor and and psychiatry. Could we build like a coach or can we Could we build like a coach or can we can we build a tool that integrates the can we build a tool that integrates the second or you know, it takes a long time second or you know, it takes a long time to see a psychiatrist after a primary to see a psychiatrist after a primary care referral. Is there a is there like care referral. Is there a is there like a digital bridge that we can use?" And a digital bridge that we can use?" And so I think knowing what the hospitals so I think knowing what the hospitals are facing makes a big difference and are facing makes a big difference and and um and and a lot of hospitals are and um and and a lot of hospitals are facing the same thing. They're in a facing the same thing. They're in a situation where they say, "Boy, we can situation where they say, "Boy, we can use artificial intelligence to really use artificial intelligence to really improve these clinical workflows. We've improve these clinical workflows. We've got to make sure it's safe. We've got to got to make sure it's safe. We've got to make sure the companies we working with make sure the companies we working with have done like, you know, pilot work.

have done like, you know, pilot work. They have research. They're They have research. They're evidence-based and then we can move evidence-based and then we can move forward." So when these companies come forward." So when these companies come to sell to a health system, they got to to sell to a health system, they got to think, well, there's there's several think, well, there's there's several different audiences that I need I need different audiences that I need I need to I need to connect with. I need to to I need to connect with. I need to make sure that when I'm building make sure that when I'm building alliance with the hospital mission so alliance with the hospital mission so the CEO is going to like me. I need to the CEO is going to like me. I need to make sure I'm going to save the money or make sure I'm going to save the money or produce a new revenue stream or make produce a new revenue stream or make something more efficient for them so the something more efficient for them so the CFO is going to like me. I need to make CFO is going to like me. I need to make sure what I'm doing integrates with sure what I'm doing integrates with their current uh electronic health their current uh electronic health record and their and their SIS and their record and their and their SIS and their digital health, you know, stack so that digital health, you know, stack so that the CTO likes me. And then I got to make the CTO likes me. And then I got to make sure this is a need the physicians even sure this is a need the physicians even want in the first place. So I have, you want in the first place. So I have, you know, a physician evangelist that's know, a physician evangelist that's going to support me. And so that that's going to support me. And so that that's a that's a really heavy task to think a that's a really heavy task to think I've got to sell to four different I've got to sell to four different people. But you do that by speaking in people. But you do that by speaking in all their language. You got to make sure all their language. You got to make sure you know your vision's aligned, that you know your vision's aligned, that your that your finances make sense, that your that your finances make sense, that you're that you're building something you're that you're building something they want that integrates within the they want that integrates within the system. And I think that's that's a big system. And I think that's that's a big thing to understand. um kind of shifting thing to understand. um kind of shifting a little bit. A lot of the specialty a little bit. A lot of the specialty societies have been really proactive in societies have been really proactive in this because you know you have this because you know you have physicians with all variable levels of physicians with all variable levels of AI familiarity and training and use. And AI familiarity and training and use. And so it's it's interesting. I I work with so it's it's interesting. I I work with two of my colleagues at at Stanford, Dev two of my colleagues at at Stanford, Dev Dash and Andy Chu, and they said, you Dash and Andy Chu, and they said, you know, how are we going to get just kind know, how are we going to get just kind of baseline AI knowledge through of baseline AI knowledge through emergency medicine? We're going to need emergency medicine? We're going to need to involve all the specialy societies, to involve all the specialy societies, you know, ASAP, SAM, AEM. let's have a you know, ASAP, SAM, AEM. let's have a joint group that says this is and we'll joint group that says this is and we'll recommend some best practices for AI recommend some best practices for AI implementation into their EDS and then implementation into their EDS and then we then we'll address how we're doing we then we'll address how we're doing this through

education because you have this through education because you have you know at Harvey's home state you've you know at Harvey's home state you've got Texas you have the med school at El got Texas you have the med school at El Paso is now doing a combined med school Paso is now doing a combined med school and AI combined degree that's very ahead and AI combined degree that's very ahead of the curve you have places like of the curve you have places like Stanford and Harvard where they're Stanford and Harvard where they're giving their kids uh you know their giving their kids uh you know their students LLMs to work with for their students LLMs to work with for their education um but Not everybody's getting education um but Not everybody's getting that and so you have to say what are we that and so you have to say what are we going to do for the new grads versus the going to do for the new grads versus the folks that have been practicing forever folks that have been practicing forever so they have some baseline familiarity so they have some baseline familiarity with how they can use that and how they with how they can use that and how they can move forward and so I I think it's can move forward and so I I think it's really incumbent on hospitals addressing really incumbent on hospitals addressing their needs but then the specialist their needs but then the specialist society's looking at that and then society's looking at that and then companies that are coming to pitches I'm companies that are coming to pitches I'm saying all right how am I going to you saying all right how am I going to you know meet the pain points of all these know meet the pain points of all these different groups but that's how they're different groups but that's how they're going to gain traction that's how going to gain traction that's how they're going to be effective they're going to be effective >> thank you so much for I'm gonna just >> thank you so much for I'm gonna just take a step back and sort of uh take a step back and sort of uh summarize everything. Uh number one, summarize everything. Uh number one, biomedical uh at Stanford is amazing.

biomedical uh at Stanford is amazing. They have done a lot of uh coding and They have done a lot of uh coding and they have made it open source. So go they have made it open source. So go ahead and check that out. including uh ahead and check that out. including uh Harvey, I don't know if you know this, Harvey, I don't know if you know this, they actually have a full-blown they actually have a full-blown application where you can pull data from application where you can pull data from u Apple Healthcare and Android u Apple Healthcare and Android completely open source and then you can completely open source and then you can build on your applications quickly and build on your applications quickly and faster. Um now there is the second thing faster. Um now there is the second thing of course I want to read Anthony Chang's of course I want to read Anthony Chang's uh ABIM we please do attend that course.

uh ABIM we please do attend that course. I highly recommend it for any physician I highly recommend it for any physician or non-f physician interested in or non-f physician interested in building healthcare AI and clinical building healthcare AI and clinical work. I did not do the advanced one.

work. I did not do the advanced one. Actually, Harvey did the advanced one as Actually, Harvey did the advanced one as well. We are I was actually within the well. We are I was actually within the Harvey was at probably with the first Harvey was at probably with the first cohort, but I was within the first three cohort, but I was within the first three or four cohorts. Extremely important or four cohorts. Extremely important must and very cheap amazing. And also uh must and very cheap amazing. And also uh Anthony Chang is a superb teacher and Anthony Chang is a superb teacher and make sure you attend AI meds every time.

make sure you attend AI meds every time. So that's number two. Uh and then now So that's number two. Uh and then now we're going to come to journeys. So we we're going to come to journeys. So we have three clinicians and Edward Parks have three clinicians and Edward Parks which is a different journey and there which is a different journey and there are different journeys that you can take are different journeys that you can take in terms of your path from clinician to in terms of your path from clinician to entrepreneur and I'm going to push back entrepreneur and I'm going to push back and as you know I ask hard questions one and as you know I ask hard questions one path was mine uh physician learn execute path was mine uh physician learn execute as a startup then Harvey's as as a startup then Harvey's a learn and then uh physician learn a learn and then uh physician learn angel investor basically influencer at angel investor basically influencer at the end of the day that's second path the end of the day that's second path and then third path is John Dayton who and then third path is John Dayton who is learn uh physician learn and then uh is learn uh physician learn and then uh you know become an you know investor you know become an you know investor there so many different paths and then there so many different paths and then so many ways but people come asking me so many ways but people come asking me that those two things that I

told that those two things that I told biomedical fellowship is a separate biomedical fellowship is a separate thing and then of course uh this AI med thing and then of course uh this AI med but other than that did MBA really help but other than that did MBA really help you or was it my question is that this you or was it my question is that this is me and Harvey are really pissed is me and Harvey are really pissed because I tell Harvey you are not going because I tell Harvey you are not going to do AI to do AI he and you hit a very I think that you he and you hit a very I think that you need to learn on the job as being a need to learn on the job as being a startup because I need to do marketing startup because I need to do marketing as a matter of fact I did actually was as a matter of fact I did actually was at Vivven Health which was a startup for at Vivven Health which was a startup for two years and basically I said rather two years and basically I said rather than you know putting money into a MBA than you know putting money into a MBA which was free for you which is again if which was free for you which is again if it wasn't free would you do it that it wasn't free would you do it that second question and then the third point second question and then the third point is uh rather than doing this as a is uh rather than doing this as a physician should they actually join and physician should they actually join and then get access to real world data then get access to real world data decisions because let's just assume decisions because let's just assume right now I fired my whole marketing right now I fired my whole marketing team and I need to I want to teach to team and I need to I want to teach to another physician why I did that do you another physician why I did that do you understand what I'm trying to say is understand what I'm trying to say is that MBA gonna teach you or not So that MBA gonna teach you or not So question number one, should we do an question number one, should we do an actual MBA? If it's not free, let's just actual MBA? If it's not free, let's just be honest, if it's free, you should do be honest, if it's free, you should do it. But then the second question is uh it. But then the second question is uh when you are looking at a VC and you're when you are looking at a VC and you're talking to Jana Kalia and says, is it talking to Jana Kalia and says, is it more important that he has an MBA or is more important that he has an MBA or is it more important he has experience in a it more important he has experience in a real startup before before you fund a a real startup before before you fund a a Tough questions, John. Believe me.

Tough questions, John. Believe me. >> Yeah, I know. >> Yeah, I know. >> People don't People hate me about it. >> People don't People hate me about it.

So, and especially my besties over here. So, and especially my besties over here. >> I I'm going to be I'm going to try to be >> I I'm going to be I'm going to try to be as diplomatic as I can about it because as diplomatic as I can about it because I know people been very successful.

I know people been very successful. Here's my take and here's why I decided Here's my take and here's why I decided to do an MBA. to do an MBA. >> Um and these are important for the >> Um and these are important for the knowledge and the network.

knowledge and the network. >> Um you can get knowledge a lot of >> Um you can get knowledge a lot of different ways but the network the different ways but the network the network is crucial. The other thing is network is crucial. The other thing is where you I have a totally different you where you I have a totally different you know traditional track you know I'm a know traditional track you know I'm a physician I you know I work in the ER I physician I you know I work in the ER I it's having an MBA is a little bit of a it's having an MBA is a little bit of a level of street credit to say hey I you level of street credit to say hey I you know I I am a physician but I did this know I I am a physician but I did this training so that I can work in this training so that I can work in this other space VC is a hard you know it's a other space VC is a hard you know it's a hard nut to crack it's a hard thing to hard nut to crack it's a hard thing to get into and so you want to stack the get into and so you want to stack the deck in your favor. The other thing that deck in your favor. The other thing that I like about it is you can be very I like about it is you can be very intentional about the NBA you do. I I intentional about the NBA you do. I I wouldn't recommend just any MBA. I wouldn't recommend just any MBA. I wouldn't recommend just any like EMBA. I wouldn't recommend just any like EMBA. I was very specific when I looked at it.

was very specific when I looked at it. You know, Harvey did the one out of You know, Harvey did the one out of Tennessee that's specifically for Tennessee that's specifically for physicians. I think that's a great um a physicians. I think that's a great um a way a way of saying, "Hey, listen. This way a way of saying, "Hey, listen. This is a group of physicians. They want to is a group of physicians. They want to do executive level work. We're going to do executive level work. We're going to train them on that." I I did mine train them on that." I I did mine through John's

Hopkins because a lot of through John's Hopkins because a lot of uh healthcare leaders go through that.

uh healthcare leaders go through that. It's it's very healthcare driven and It's it's very healthcare driven and they have different subsp specialists they have different subsp specialists within their MBA. So I did my MBA but I within their MBA. So I did my MBA but I had two focuses. I did healthcare had two focuses. I did healthcare entrepreneurship and I did venture entrepreneurship and I did venture capital. So I studied things very capital. So I studied things very specifically related to what I wanted to specifically related to what I wanted to do when I finished. And so I I think you do when I finished. And so I I think you have to do the thing that that's right have to do the thing that that's right for you. I'm not discounting, you know, for you. I'm not discounting, you know, work that people do on the side. We're work that people do on the side. We're we're physicians. We're lifelong we're physicians. We're lifelong learners by default. That's what we're learners by default. That's what we're going to do. But I think you have to be going to do. But I think you have to be kind of intentional about where you get kind of intentional about where you get that knowledge, who you're getting it that knowledge, who you're getting it with, and and if you're saying, "Hey, with, and and if you're saying, "Hey, listen, I I'm gonna make a, you know, listen, I I'm gonna make a, you know, you know, a career upskill, then I then you know, a career upskill, then I then I want to stack all the all the cards in I want to stack all the all the cards in my favor so that I can have this my favor so that I can have this position when I finish." And so that position when I finish." And so that that's why I that's why I did the MBA.

that's why I that's why I did the MBA. And so it's kind kind of the same thing And so it's kind kind of the same thing with VC. It's like who who gets a big VC with VC. It's like who who gets a big VC job with like Andrea or Kleiner Perkins?

job with like Andrea or Kleiner Perkins? it's someone that went to like a top it's someone that went to like a top tier MBA program or on the health tier MBA program or on the health investor side, it's someone that built a investor side, it's someone that built a really cool company and so they've really cool company and so they've proven their street credit uh that way proven their street credit uh that way as well. And so like w with the Stanford as well. And so like w with the Stanford Emergency Department since we lean in so Emergency Department since we lean in so heavily on on innovation, we actually heavily on on innovation, we actually have two great residents that are have two great residents that are investors with funds. One's Sherman Lung investors with funds. One's Sherman Lung from Andre, the other one's Andrew from Andre, the other one's Andrew Paramath from PARVC. And so we've been Paramath from PARVC. And so we've been able to say, "Hey, listen, we are so able to say, "Hey, listen, we are so leaning on on innovation. We have this leaning on on innovation. We have this innovation fellowship. We're able to innovation fellowship. We're able to attract folks that are that are attract folks that are that are interested in doing in that space." And interested in doing in that space." And so you look at um Sherman's colleagues so you look at um Sherman's colleagues with um with the bio health division of with um with the bio health division of Andre and it's, you know, Venita Agriala Andre and it's, you know, Venita Agriala who is a physician herself um and then who is a physician herself um and then uh Julie Yu who built a healthcare uh Julie Yu who built a healthcare company. She proved her chops with that.

company. She proved her chops with that. And so that's but that's that's kind of And so that's but that's that's kind of how you get to th those those big spots how you get to th those those big spots uh in VC. So, I think it it is a mix of uh in VC. So, I think it it is a mix of both, but I think you want to do both, but I think you want to do everything in your favor to get there.

everything in your favor to get there. So, that's that's So, that's that's >> love it >> love it >> a long way. I'm I'm gonna add to that >> a long way. I'm I'm gonna add to that because I got the MBA as well. And and because I got the MBA as well. And and here here's I'm going to add to what here here's I'm going to add to what John said. I you're going to laugh at my John said. I you're going to laugh at my statement. I got my MBA because I had a statement. I got my MBA because I had a straight MBA and I had started a straight MBA and I had started a company. I had over 400 employees. So, I company. I had over 400 employees. So, I was on my 40th company and I was well was on my 40th company and I was well known. But the fact that people that known. But the fact that people that didn't know me, they saw me as Dr.

didn't know me, they saw me as Dr. Castro. Now, when they looked me up, Castro. Now, when they looked me up,

they're like, "Wait a second, this guy they're like, "Wait a second, this guy has an NBA. Let me dig a little deeper.

has an NBA. Let me dig a little deeper. Let me look into him." And then they Let me look into him." And then they find my street NBA and realize, "Okay, find my street NBA and realize, "Okay, this guy is the real deal." Um, and I'm this guy is the real deal." Um, and I'm not toing my own horn. I'm just saying not toing my own horn. I'm just saying that's the reason I personally got the that's the reason I personally got the NBA. And and to John's point, yes, I NBA. And and to John's point, yes, I think the network effect is huge. being think the network effect is huge. being in the know of other people that think in the know of other people that think like you do things like you like John like you do things like you like John and I have been friends all year all and I have been friends all year all these years not by coincidence it's just these years not by coincidence it's just because we are similar minded similar because we are similar minded similar path and we're networking with other path and we're networking with other people similar to us right John people similar to us right John and just one more thing to add I really and just one more thing to add I really enjoy like advising companies and enjoy like advising companies and helping them like really enjoy working helping them like really enjoy working in the the financial space but I thought in the the financial space but I thought I want to do this better and I and I I want to do this better and I and I feel like doing an MBA was my was my key feel like doing an MBA was my was my key to say you know just like we study the to say you know just like we study the evidence-based medicine we go through evidence-based medicine we go through med school. What are the best practices med school. What are the best practices for for building and managing a fund?

for for building and managing a fund? What are the best practice for advising What are the best practice for advising a company and I feel like I I got a a company and I feel like I I got a better handle on that through my better handle on that through my program.

program. program. >> Absolutely love it. Uh you're absolutely >> Absolutely love it. Uh you're absolutely right. I do miss out on a lot of right. I do miss out on a lot of opportunities within because I don't opportunities within because I don't have an MBA. So I just want to be very have an MBA. So I just want to be very clear about it. So I did make a pros and clear about it. So I did make a pros and cons. What I just wanted to do was that cons. What I just wanted to do was that hey I don't want to delay two more years hey I don't want to delay two more years to build my startup. And then I actually to build my startup. And then I actually wrote down what my cons will be. One of wrote down what my cons will be. One of them was network uh which Edward Marks them was network uh which Edward Marks and Harvey Castro are amazing. I just and Harvey Castro are amazing. I just text them, hey, do you have a phone text them, hey, do you have a phone number for this guy and they find it for number for this guy and they find it for me me me >> that >> that >> that if you're going to do an MBA, how do I if you're going to do an MBA, how do I do it while I'm still practicing? And so do it while I'm still practicing? And so that's why I think a lot of the that's why I think a lot of the executive MBAs focused on physicians are executive MBAs focused on physicians are are probably the best way to do it are probably the best way to do it because it's built around a a clinical because it's built around a a clinical schedule. I I did mine even though it's schedule. I I did mine even though it's you even though I've never stepped a you even though I've never stepped a foot on Car's um business school campus.

foot on Car's um business school campus. I did it I was able to do it all on I did it I was able to do it all on mine. Part of that was COVID and part of mine. Part of that was COVID and part of that was they were building an online that was they were building an online program. So I think you have to figure program. So I think you have to figure out what how how do I reach these out what how how do I reach these current goals with my current working current goals with my current working situation too and I think that that's situation too and I think that that's got to be a big uh question that factors got to be a big uh question that factors into how you do it. And that's truly into how you do it. And that's truly important too. Like I just wanted to important too. Like I just wanted to make sure that you guys understand that make sure that you guys understand that I have now a network of adviserss like I have now a network of adviserss like Harvey now John he's going to introduce Harvey now John he's going to introduce me to VCs. I don't have an M&A me to VCs. I don't have an M&A background so I'm going to get advisers background so I'm going to get advisers and MA strategists. So there's so many and MA strategists. So there's so many ways to skin the cat and that's just ways to skin the cat and that's just wanted to open your minds that a wanted to open your minds that a physicians can now should be able to physicians can now should be able to code become software engineers code become software engineers eventually product engineers. Number b eventually product engineers. Number b there's so many ways to skin the cat.

there's so many ways to skin the cat. Get in the game please. Do not worry Get in the game please. Do not worry about it. It is a learning process. Take about it. It is a learning process. Take the first step and then you're going to the first step and then you're going to realize what the second step is. Maybe realize what the second step is. Maybe wrong. So what? I can come back and go wrong. So what? I can come back and go to MBA right now too. Right? So these to MBA right now too. Right? So these are learning curves. Do not get hung up are learning curves. Do not get hung up on specifics. Start work, you know, on specifics. Start work, you know, crawling. So you can walk and then you crawling. So you can walk and then you will run. So I'm grateful.

will run. So I'm grateful. >> Go ahead. >> Go ahead. >> You know, our audience is is is a mix >> You know, our audience is is is a mix which is the way we wanted it. And so which is the way we wanted it. And so there's nonclinians who are correct there's nonclinians who are correct >> as well. And I just want to say and I've >> as well. And I just want to say and I've I've said it before in other venues that I've said it before in other venues that if you are a traditional CIO like you're if you are a traditional CIO like you're talking about traditional physician do I talking about traditional physician do I get my MBA or not. Um, on the other on get my MBA or not. Um, on the other on the flip side, if if you're a leader in the flip side, if if you're a leader in healthcare and you don't have any healthcare and you don't have any clinical background, you need to figure clinical background, you need to figure out ways to get it. And you don't have out ways to get it. And you don't have to go to med school, you know, and and to go to med school, you know, and and that's what I did, right? I I worked in that's what I did, right? I I worked in the O one shift a week. I mean, anyone the O one shift a week. I mean, anyone pretty much that's learned can take pretty much that's learned can take courses and become an anesthesia tech courses and become an anesthesia tech just as one example. And that's what I just as one example. And that's what I did. And so I served one shift a week in did. And so I served one shift a week in the O. And that gave me a lot of the O. And that gave me a lot of insights I never had. And uh and there's insights I never had. And uh and there's other things that you can do. Uh you can other things that you can do. Uh you can take clinical courses, of course. You take clinical courses, of course. You could go get your r your BFN. You can do could go get your r your BFN. You can do other things. But the same argument that other things. But the same argument that you're all making about why you need to you're all making about why you need to go and get some of this experience or go and get some of this experience or education. I just want to make sure our education. I just want to make sure our nonclinical audience takes this to heart nonclinical audience takes this to heart because it's the same thing. I had less because it's the same thing. I had less credibility when I was just tech. Uh but credibility when I was just tech. Uh but I had tremendous credibility when people I had tremendous credibility when people saw that I was willing to to spend one saw that I was willing to to spend one in addition to my regular job. Uh I I in addition to my regular job. Uh I I took a whole shift, you know, every week took a whole shift, you know, every week and I did other things as well. But and I did other things as well. But that's just and I have a little, you that's just and I have a little, you know, because of my uh combat medic know, because of my uh combat medic experience and things like that. So experience and things like that. So there's stuff you could do. I just want there's stuff you could do. I just want to make sure that we share that with the to make sure that we share that with the audience that they should be listening audience that they should be listening and if they're not clinicians, they and if they're not clinicians, they should flip it. Hey, what can I do to should flip it. Hey, what can I do to get closer to the clinician side as get closer to the clinician side as you're trying to get closer to the you're trying to get closer to the business side?

business side? Good point. Good point. >> So very important what Edward said is >> So very important what Edward said is that there is one thing called knowledge that there is one thing called knowledge and there is one thing on experience and and there is one thing on experience and those can be stacked separately either those can be stacked separately either for clinicians or nonclinicians and for clinicians or nonclinicians and therefore we're going to go through it.

therefore we're going to go through it. John, one more hard question. Now I'm John, one more hard question. Now I'm just going to be honest with you. It's just going to be honest with you. It's probably easier to you know advise probably easier to you know advise consult as compared to building your own consult as compared to building your own company because you have to really get company because you have to really get your hands wet. Oh, 100.

your hands wet. Oh, 100. It's not easier to pick a winner than to It's not easier to pick a winner than to create a winner, right? create a winner, right?

>> I don't know. Picking a winner is very >> I don't know. Picking a winner is very hard. I'm just going to be honest with hard. I'm just going to be honest with you. Um, it is like it has been it is it you. Um, it is like it has been it is it has been unknowingly hard to to do that has been unknowingly hard to to do that as well. So, what I'm trying to say is as well. So, what I'm trying to say is that that here's the last trick that that that here's the last trick that uh what and I I chose building a uh what and I I chose building a company. This is I do not recommend to company. This is I do not recommend to anyone. I just going to be very honest anyone. I just going to be very honest with you. nor picking a winner is so with you. nor picking a winner is so freaking hard because just a reminder I freaking hard because just a reminder I was actually before I started this I was was actually before I started this I was an angel investor did a lot of due an angel investor did a lot of due diligence I was also an adviser at some diligence I was also an adviser at some VC lab I forget and then looked at pitch VC lab I forget and then looked at pitch techs at least a thousand of them talked techs at least a thousand of them talked to in founders etc how their problem to in founders etc how their problem solving is again part and parcel of my solving is again part and parcel of my learning I I like more hand again my learning I I like more hand again my learning is different I like hands-on learning is different I like hands-on because I'm an ICU physician I like to because I'm an ICU physician I like to do the you know get the procce procedure do the you know get the procce procedure depend depends on what your what your depend depends on what your what your what your learning method is. You're an what your learning method is. You're an ER physician. So so now tell me tell me ER physician. So so now tell me tell me your decision process.

your decision process. >> Yeah. >> Yeah. >> Yeah. >> When you were thinking from a fellowship >> When you were thinking from a fellowship because again we again the whole point because again we again the whole point is nonclinians and clinicians to come in is nonclinians and clinicians to come in the innovation game. We want more people the innovation game. We want more people uh and forget about the goddamn uh and forget about the goddamn competition. Everyone has enough this competition. Everyone has enough this what 4.5 trillion already is going to be what 4.5 trillion already is going to be six trillion 18% of the GDP we have six trillion 18% of the GDP we have enough people to feed what I'm going to enough people to feed what I'm going to say is that uh John walk people through say is that uh John walk people through your not in the way that why you made your not in the way that why you made the decision more importantly if they the decision more importantly if they were making a decision how they should were making a decision how they should approach it. Yeah, you know, great approach it. Yeah, you know, great question. I kind of going back to question. I kind of going back to something I was saying earlier. Ear docs something I was saying earlier. Ear docs are famous for for burning out. We, you are famous for for burning out. We, you know, it's it's fun to be the guy that know, it's it's fun to be the guy that leads the trauma team on a Saturday leads the trauma team on a Saturday night, you know, when you're in your 30s night, you know, when you're in your 30s and then when you're in your 40s, you're and then when you're in your 40s, you're like, "Oh, I'm working two night shifts like, "Oh, I'm working two night shifts this weekend." And that and it's a this weekend." And that and it's a little bit harder. Um, also because we little bit harder. Um, also because we were the, you know, the safety net, we were the, you know, the safety net, we kind of see where all the things that kind of see where all the things that that aren't happening right that can get that aren't happening right that can get people a little bit depressed and so people a little bit depressed and so that it's kind of a thing in emergency that it's kind of a thing in emergency medicine. If you're if you want career medicine. If you're if you want career longevity, you've gota you got to be longevity, you've gota you got to be like ER doctor press plus, right? Like like ER doctor press plus, right? Like so I'm, you know, you'll have ER doctors so I'm, you know, you'll have ER doctors that are ultrasound gurus or you'll have that are ultrasound gurus or you'll have ER docs that are like trauma, you know, ER docs that are like trauma, you know, trauma leaders and and so I'm I just trauma leaders and and so I'm I just thought to myself, what what's going to thought to myself, what what's going to be my plus? What's going to keep me into be my plus? What's going to keep me into this? And I loved setting up these pitch this? And I loved setting up these pitch events. I loved hearing about these new events. I loved hearing about these new companies. I, you know, a lot of new, companies. I, you know, a lot of new, you know, new businesses would come you know, new businesses would come reach out to me and say, "Hey, what do reach out to me and say, "Hey, what do you think of our product? What are we, you think of our product? What are we, you know, what should we do with this?" you know, what should we do with this?" And I like being involved in that. And And I like being involved in that. And and so I realized this is just an area and so I realized this is just an area that's that's really interesting to me.

that's that's really interesting to me. And so I something where I can kind of And so I something where I can kind of leverage where I see these pain points leverage where I see these pain points in healthcare and I can, you know,

give in healthcare and I can, you know, give give, you know, first person account give, you know, first person account where this is a painoint to me. This is where this is a painoint to me. This is a big thing. and maybe that's a pain a big thing. and maybe that's a pain point for the hospital where I'm working point for the hospital where I'm working and so wanting to wanting to kind of and so wanting to wanting to kind of kind of leverage that. And so that's kind of leverage that. And so that's that's that's been my background. And that's that's been my background. And the other part of a lot of us, you know, the other part of a lot of us, you know, over the last 10 years in healthc care over the last 10 years in healthc care physicians for the first time are more, physicians for the first time are more, you know, hospital employees than their you know, hospital employees than their than their own, you know, running their than their own, you know, running their own practice. And so a lot of a lot of own practice. And so a lot of a lot of physicians kind of feel like a cog. And physicians kind of feel like a cog. And I've realized this is something if I've realized this is something if you're in the trenches and you're you're in the trenches and you're building a solution or you're funding a building a solution or you're funding a solution that that helps you break out solution that that helps you break out of this external locus of control of of this external locus of control of like, hey, I'm I'm still in charge of my like, hey, I'm I'm still in charge of my destiny whether I'm an employee or destiny whether I'm an employee or whether I own my own practice. And so whether I own my own practice. And so that's that's something I really like that's that's something I really like about it as well.

about it as well. >> So beautifully said. Actually, I'm going >> So beautifully said. Actually, I'm going to convert this to Ed now. And as a to convert this to Ed now. And as a non-clinian non-clinian non-clinian if you want to become CIO of a hospital if you want to become CIO of a hospital there are so many ways to cut the there are so many ways to cut the threads you can go through that process threads you can go through that process but more importantly but more importantly if you don't want to be in the weeds of if you don't want to be in the weeds of it but you know become more of a you it but you know become more of a you know money man or consultant or know money man or consultant or authorization how how would you if you authorization how how would you if you go back on your life and then sort of go back on your life and then sort of think about decisions and most think about decisions and most importantly By the way, also I love it importantly By the way, also I love it when you say it that it's not about when you say it that it's not about decisions. Sometimes just life happens.

decisions. Sometimes just life happens. But what I'm saying is that how how But what I'm saying is that how how would you approach it if you were an would you approach it if you were an >> Yeah. Trying to go down into the CIO >> Yeah. Trying to go down into the CIO path path path >> as a nonclin which is Yeah. As a noncl >> as a nonclin which is Yeah. As a noncl clinician.

clinician. clinician. >> Yeah. >> Yeah. >> Yeah. >> Yeah. >> Yeah. >> Yeah. >> Well, for sure. Like I said, uh you need >> Well, for sure. Like I said, uh you need whatever the industry is, but obviously whatever the industry is, but obviously we're healthcare. You you need to we're healthcare. You you need to understand it at a groundbased level. So understand it at a groundbased level. So you need to take a position working in you need to take a position working in the lab like working in radiology, work the lab like working in radiology, work like I did. I was a combat medic and like I did. I was a combat medic and then I worked in anesthesia. I was a then I worked in anesthesia. I was a tech. Uh I think that's a ground that tech. Uh I think that's a ground that gives you the foundation to truly gives you the foundation to truly understand coming at it from a pure tech understand coming at it from a pure tech perspective. I mean certainly people perspective. I mean certainly people have made that transition and it's good have made that transition and it's good but I think it's always important to but I think it's always important to understand right because you got to have understand right because you got to have the heart like what are you what are we the heart like what are you what are we doing we're healing people we're we're doing we're healing people we're we're taking care of people um so it's always taking care of people um so it's always important to have that clinical basis important to have that clinical basis not everyone can be a doctor I wasn't a not everyone can be a doctor I wasn't a doctor but there's other things you can doctor but there's other things you can do like I'm sharing that are not hard do like I'm sharing that are not hard anyone can do them and so I would even anyone can do them and so I would even recommend uh going in and out uh in recommend uh going in and out uh in terms of your career so uh you might terms of your career so uh you might start off as an anesthesia tech and then start off as an anesthesia tech and then take a role in IT as an analyst and then take a role in IT as an analyst and then a few years later maybe you go back and a few years later maybe you go back and get your BSN or you do premed or what get your BSN or you do premed or what what it might be and then you go back in what it might be and then you go back in on the IT side. I think the more you can on the IT side. I think the more you can weave

the two together uh the better weave the two together uh the better you're prepared to lead. Now certainly you're prepared to lead. Now certainly there's always examples of people who there's always examples of people who are pure clinicians and they jump over are pure clinicians and they jump over and they're awesome. Um and there's and they're awesome. Um and there's examples where it's just a pure tech examples where it's just a pure tech person that comes in and they're person that comes in and they're awesome. But I think the strongest and awesome. But I think the strongest and again you're asking for a recommendation again you're asking for a recommendation is if I were to like try to plan it out.

is if I were to like try to plan it out. I would I would weave in and out. I I would I would weave in and out. I would definitely become a a clinician of would definitely become a a clinician of some sort and then work in it and just some sort and then work in it and just continuously mel the two together continuously mel the two together because you never want to be all about because you never want to be all about the tech because that because that's not the tech because that because that's not where we're about. You never want to be where we're about. You never want to be just clinician because you don't want to just clinician because you don't want to ignore the tech. But it's that person ignore the tech. But it's that person like yourselves that can bring the two like yourselves that can bring the two together to ultimately save lives and together to ultimately save lives and care for people um in the worst times of care for people um in the worst times of their life.

their life. >> Awesome discussion, John. Thank you so >> Awesome discussion, John. Thank you so much. We might have to bring you back in much. We might have to bring you back in and then we're going to go ahead and do and then we're going to go ahead and do a specific discussion on um maybe like a specific discussion on um maybe like uh I'm what you exactly said. And by the uh I'm what you exactly said. And by the way, Edward Marks loves this. His way, Edward Marks loves this. His advisory is amazing. He has been very advisory is amazing. He has been very kind to me how to talk to CFOs, CTO's, kind to me how to talk to CFOs, CTO's, CEOs, board members, etc. His GTM CEOs, board members, etc. His GTM strategy is so important. Please reach strategy is so important. Please reach out to him if you haven't. And I'm very out to him if you haven't. And I'm very grateful to him personally that he grateful to him personally that he taught me all of this. I'm going to ask taught me all of this. I'm going to ask two very specific questions. You're two very specific questions. You're going to just say very oneeline answers, going to just say very oneeline answers, all three of you, and then we're going all three of you, and then we're going to go ahead and then uh close it out to go ahead and then uh close it out today and we're going to bring John today and we're going to bring John again. Number one, are entrepreneurs again. Number one, are entrepreneurs uh born or built? Is this a genetic or uh born or built? Is this a genetic or an environmental factor? That's number an environmental factor? That's number one. And then number two, I my one. And then number two, I my prediction is that primary care prediction is that primary care physician is going to go away. I don't physician is going to go away. I don't know one one year, three year, 5 year, know one one year, three year, 5 year, 10 year because of AI is going to go 10 year because of AI is going to go away. What is going to replace it? One away. What is going to replace it? One line answers and then we're going to line answers and then we're going to close it. We only have three minutes.

close it. We only have three minutes. I'm going to start with Ed first and I'm going to start with Ed first and nobody repeat the answers. Sorry. Go nobody repeat the answers. Sorry. Go is having some connectivity issues.

is having some connectivity issues. John, why don't you start? John, why don't you start? >> Yeah, absolutely. As far as Borner belt, >> Yeah, absolutely. As far as Borner belt, I I don't want to sound wishy I I don't want to sound wishy wishywashy, but I think it's a wishywashy, but I think it's a combination of the two. I think some combination of the two. I think some people are born salesmen. I think some people are born salesmen. I think some people are born problem solvers. But, people are born problem solvers. But, you know, one of the reasons that I that you know, one of the reasons that I that I like the training is because anybody I like the training is because anybody can learn best practices. Anybody can can learn best practices. Anybody can learn ways to move ahead and and and a learn ways to move ahead and and and a lot of times everyone can learn humility lot of times everyone can learn humility and say, "Hey, I'm good on the clinical and say, "Hey, I'm good on the clinical side, but the reason I'm building my side, but the reason I'm building my venture fund with an operator is because venture fund with an operator is because I want I want both sets of knowledge in I want I want both sets of knowledge in what I'm doing." As as far as primary what I'm doing." As as far as primary care, I I'm going to be a contrarian care, I I'm going to be a contrarian there. I I think that AI is going to there. I I think that AI is going to enable them to increase and enhance

enable them to increase and enhance their role. And and what I mean by that their role. And and what I mean by that is I I think AI is going to allow them is I I think AI is going to allow them to kind of free up all the to kind of free up all the administrative things that they're not administrative things that they're not getting paid for to go back and be, you getting paid for to go back and be, you know, the quarterback for patient care.

know, the quarterback for patient care. I think future practice is going to I think future practice is going to involve, you know, your primary care involve, you know, your primary care doctor. I think everyone's going to have doctor. I think everyone's going to have like Agentic AI tools, maybe like a, you like Agentic AI tools, maybe like a, you know, a physician AI that that it's know, a physician AI that that it's involved with their care. But I I think involved with their care. But I I think AI is actually enable them to enhance AI is actually enable them to enhance their position rather than have it be their position rather than have it be eliminated.

>> born or built? >> born or built? >> Did you go back to me? >> Did you go back to me? >> Yeah. Yeah. >> Yeah. Yeah. >> Sorry. Um I don't know what's what's >> Sorry. Um I don't know what's what's happening to my thing. Um uh so I'm happening to my thing. Um uh so I'm going to take a hard stance. I won't be going to take a hard stance. I won't be wishy-washy. Uh you're born you're born wishy-washy. Uh you're born you're born with certain traits to uh to want to with certain traits to uh to want to lead to to invent to you know uh you're lead to to invent to you know uh you're born that way.

born that way. And what about what's going to replace And what about what's going to replace uh primary care once it's gone because uh primary care once it's gone because of AI? What do you think is going to be of AI? What do you think is going to be the new model?

the new model? >> Oh yeah, agents all the way. >> Oh yeah, agents all the way. >> Yeah, perfect. And within years >> Yeah, perfect. And within years I I have a I have a whole talk on this I I have a I have a whole talk on this actually. It's actually both. There's actually. It's actually both. There's some genetic components where we some genetic components where we actually do have some genes that uh push actually do have some genes that uh push us to be entrepreneurs and we are us to be entrepreneurs and we are risktakers and whatnot. the environment risktakers and whatnot. the environment totally environment will push you and totally environment will push you and and there's tons of examples and on the and there's tons of examples and on the second question I actually am with John second question I actually am with John I call it the great shift and in that I call it the great shift and in that great shift we're going to see different great shift we're going to see different roles of how we practice medicine and roles of how we practice medicine and the primary care physician will be able the primary care physician will be able to start doing medicine in a different to start doing medicine in a different level because of AI and the level because of AI and the dermatologist as an example will start dermatologist as an example will start seeing less cases that they normally seeing less cases that they normally would have seen because the primary care would have seen because the primary care doctor will see it because of AI doctor will see it because of AI that's that's that's I actually agree with Ed. Um, uh, I actually agree with Ed. Um, uh, entrepreneurship is a generic thing.

entrepreneurship is a generic thing. Environment unlocks it. I'm just going Environment unlocks it. I'm just going to be very honest with you. If I was to be very honest with you. If I was sitting in Pakistan, I will never be an sitting in Pakistan, I will never be an entrepreneur. And I am from Pakistan.

entrepreneur. And I am from Pakistan. It's just that it's exactly like cancer. It's just that it's exactly like cancer. It is in your DNA. Something is already It is in your DNA. Something is already there and then environment actually there and then environment actually unlocks the or the grading.

unlocks the or the grading. Exactly. So I personally believe it is a Exactly. So I personally believe it is a generic thing and uh I I'm going to go generic thing and uh I I'm going to go with that. I totally agree. Second part with that. I totally agree. Second part is that that we are going to look at is that that we are going to look at agentification of EHR charts, AI and agentification of EHR charts, AI and medicine etc. And I truly believe that medicine etc. And I truly believe that we're going to see uh the the primary we're going to see uh the the primary care going to AI plus A or physician care going to AI plus A or physician extenders while physicians are going to extenders while physicians are going to move towards higher level of care and move towards higher level of care and hopefully it

will bring both better care hopefully it will bring both better care and everything. I'm so grateful to and everything. I'm so grateful to everyone especially John for joining us everyone especially John for joining us Harvey from Amazon and Ed. Finally we Harvey from Amazon and Ed. Finally we back in Dallas. Let's grab a steak back in Dallas. Let's grab a steak together and then thank you so much. See together and then thank you so much. See