

E96: Piotr Tomasik of TensorWave | Why AI Needs Water to Survive

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SUMMARY

Peter Thomasick, co-founder and CEO of TensorWave, discusses the urgent need for advanced AI infrastructure and the challenges of energy consumption in data centers. TensorWave focuses on providing high-performance cloud infrastructure tailored for AI workloads, leveraging AMD GPUs to offer competitive alternatives to Nvidia.

- The demand for AI compute power is skyrocketing, necessitating efficient cooling solutions that require significant energy.*
- TensorWave was founded in December 2023 to address the infrastructure needs of the AI era, providing cloud services specifically for modern AI workloads.*
- Peter emphasizes the importance of fostering a tech community in Las Vegas, aiming to diversify the local economy beyond tourism.*
- The company utilizes AMD GPUs, which offer better memory efficiency compared to Nvidia's, making them a cost-effective choice for AI applications.*
- Peter's journey includes co-founding several startups, with lessons learned from early failures that shaped his approach to entrepreneurship.*
- The future of AI includes automation of mundane tasks, universal communication, and advancements in personal healthcare through AI-driven solutions.*
- The need for data centers to generate their own power is becoming critical as traditional utility companies struggle to meet demand.*
- Peter's vision for TensorWave includes scaling operations through strategic partnerships and leveraging debt financing to support growth.*

In order to keep uh water cool, you need you need a lot of energy. But also the thing that's creating um heat also requires a lot of electricity. So it's >> there's a lot of power. Yeah. And even though every successive generation has become, [music] you know, an order of magnitude more efficient in terms of how much power it's using, the demand [music] from a compute perspective is going absolutely haywire and unbound.

Today's guest is building what may become one of the most important pieces of infrastructure in the AI era. Peter Thomasick. Peter is the co-founder, CEO, and president of TensorWave, a Las Vegas-based AI cloud and compute company building the picks and shovels behind the next generation of AI innovation. TensorWave was founded in December 2023 and is focused on delivering high performance cloud infrastructure purpose-built for modern AI workloads, a problem that is quickly becoming one of the most urgent needs in technology today. Before Tensor Wave, Peter built his company, his career as a technical founder and product leader, helping scale multiple startups from early stages into real growth. He also co-founded Influential, a creator

marketing platform acquired by Publicist. Is that I pronounced that right?

>> Yeah, Publicist Group. >> Publix. There you go. and founded Les Rollolo which acquired which was acquired by Life Key. He has been recognized as one of the Las Vegas top tech execs and by the Vegas Inc. 40 under 40 and is dedicated to fostering a vibrant local tech community. Peter's story is about building from scratch, seeing around corners, and choosing long-term bets in industries where change happens overnight. Before we dive in, don't forget to like, share, and subscribe to the Matthews Mentality podcast. Peter, welcome to the show.

>> Yeah, thank you for having me. >> Thanks for having us in this beautiful office. in gorgeous Las Vegas, Nevada, where it's about 60 degrees and sunny out and the rest of the This is what what's today? January 26. I mean, it's it's bad everywhere else. So, >> it's blanketed out there. Yeah. >> I'm sure that's one of the reasons uh why you're in Las Vegas. And, you know, I was reading in in your bio, you you really are fostering a tech community here. I mean, like, tell me how that's coming along.

Yeah, it's uh it's come a long way since uh 09 when I graduated uh college uh during the financial crisis. Um couple years after that, Tony Shay came to town with uh Zappos and really bought up a ton of uh downtown Las Vegas. It was very vibrant in the early tens, but fell off drastically when Tony moved to Park City in Utah. So, I guess what I'm pointing out is, uh, you can't build an ecosystem on the shoulders of one person.

>> Yeah. >> And so, um, a couple of folks including myself, uh, Heather Brown, some other people here locally, um, started to revitalize, uh, what we were doing around economic development and specifically venture capital and startups, uh, around 2020, 2021. And uh that took the shape of uh Start of Vegas, a nonprofit that I co-founded with Heather Brown, uh Vegas Tech Summit, something I co-founded with a guy named Teddy Laauro. That's uh the whole goal is to >> get uh really high-flying founders and VCs to move to Las Vegas. Uh because the virtuous cycle is, I think, what we believe uh can really foster uh economic diversification in Nevada. Uh, the strip is really great, but you know, that's only one type and category of job. We want to help bring higher paying tech jobs to Las Vegas. And the virtual cycle is just, you know, you found companies here, hopefully you mint uh, many, many millionaires and they stay here and they want to own companies.

>> And I'm based out of Nashville, Tennessee. I I don't know how it would compare with um Las Vegas, but I know it's a big thing in Nashville is trying to create this little tech community. I know Oracle's announced their uh headquarter move there. We'll see if it happens. Amazon saying they're going to hire thousands of jobs. Um one of the things that helped in Austin, Texas, obviously um there's there's a >> I know I know a gal in Nashville. Uh she goes by Zap. I think she's a a key person in the startup ecosystem.

>> Well, we got we'll have her on, Zach. All right, we'll >> Chase, I'm going follow up with you. Look at Chase standing back there with arms crossed. Intimidating guy right there. Um, so part of I was going to say is I'm an ex Californian. Um, I saw there was I I admittedly haven't read into it, but there was some sort of um potential bill that might come to pass or maybe put on the docket in California is a billionaire's >> um tax of assets. And one of the assets is even unrealized gains and it appears it's having a massive effect on the the tech community um for saying why would you ever start a business? You build a billion dollar company. even pre-liquidity

event, California could say, "Hey, we want \$50 million."

>> Yeah. >> And it, you know, forces a sale and then something to the effect that they actually will um count voting shares, which you know, a founder may have 10% of the shares, but they may have 51% of voting shares. So, if a billion dollar company, they may say, "Okay, you have 510 million of value." It's wild. I assume that might also help drive more talent to Las Vegas. >> Yeah, I think so. Um, I think I I read somewhere that someone took a blind poll of uh billionaires in California and some wild amount like over 60% had already made plans to leave.

>> Um, in spite of, you know, this thing hadn't even passed yet, right? It's not even I don't even think it's not even [laughter] on the ballot. But I think I think the idea is um, you know, is if this isn't then another one will be and it just they'll keep coming. But that's a different conversation for a different day. >> I asset seizure is a scary >> Yeah, it's not good. Not good. Um, all right. But let's talk Tensor Wave. Tell us about Tensor Wave. What do you guys do? Um, explain. We got some pretty little things right here.

>> Uh, because this is at the epicenter >> of everything that's happening, not just in technology, but life. Like everybody's even non-technologists, real estate guys, we're the least technologically savvy industry. We're like, "Hey, let's talk about AI." But tell us about TensorWave. What do you guys do and why is it so important to what's happening in the world right now? >> Yeah, sure. I mean, fundamentally, you can't run uh an large language model and LLM without what we're putting out into the world, which is uh data center GPUs.

Um we're different in that we deploy AMD only uh GPUs. Mostly people deploy Nvidia GPUs. Um but we founded the company based on a couple of core tenants. One was uh enabling the open- source community and uh making sure that people had optionality uh in the types of uh infrastructure that they choose. Um, a lot of folks um that build large language models and run large language models have had no real choice other than uh you know Nvidia GPUs. And so we're rocketing up racking and stacking these AMD GPUs out into the world. And uh to date we're pretty much sold out.

>> That's great. Congratulations. Yeah, competition is a good thing, right? Especially for the customer and the client. And um I'm not saying Nvidia is a monopoly, but like anytime you have one industry that truly totally dominates and/or is the only option, you you know you could start to charge whatever you want and the you know the customer is like what are you going to do? So if for no other reason that's a good thing. Why Tensor Wave? like what what what what did you see um what what what was it about the space where you said hey I think I'm going to start a company and do this like what was the opportunity that maybe you saw that other people didn't see >> well I think uh all of us had a magic moment the first time we interacted with chatbt um that was certainly a foundational moment for me but more importantly my my two co-founders Jeff and Derek had a uh FPGA cloud company before this.

Um FPGAAS are a very niche type of compute. Um, but notably in the uh summer of 23, they were getting cold reachouts um at their FPGA company about GPUs, meaning customers were coming to them to solve their compute problems. Um, even though it wasn't a product that their company explicitly had on their website or

could deliver on, >> they were like, can you do this? So it was literally >> the demand was >> the demand was such that they were getting more cold inbounds about a product they didn't have and couldn't provide their actual product. maybe we should do this.

>> And we're all talking about this like, hey, there's something going on here, right? And so, um, armed with that knowledge, we went out and looked at the road map that different companies had like Intel and AMD, but settled very, you know, comfortably on one premise really. when we saw the AMD road map, they had a lot more uh memory on each GPU and uh for context um for instance uh a llama model that um Facebook or Meta uh released uh that requires somewhere around eight um AMD MI300s to run. Uh you need about 18 Nvidia H100s to run the same model. M.

>> So hopefully that's simple enough to understand like if you need 18 of something that costs roughly the same or more versus eight of something. >> Sure. >> You can see the economic benefit of going with AMD versus an >> and and so I'm a layman. Okay. So you know and a lot of our audience is very interested but they don't have your technical background. So >> AMD American company. >> Yes. >> As is Nvidia. But >> the chips are mostly coming from Taiwan.

Is that true? >> Yeah. >> Yeah. TSMC Taiwan is a >> very important or TSMC most notably is a very important uh supplier >> and I I think we're we as a country are trying to onshore some of that just from a geopolitical >> d-risking you know with China and what might happen there but so it's it's the the chips are made more or less over there and then you guys package them together into these these things called GPUs. Yeah.

>> No. So um we get our company is about I'd say two steps removed from I mean we we receive these don't get me wrong they're in the servers that we deploy in the data center. What I mean by steps removed is >> AMD sells these to OEMs like Super Micro >> or Dell which is a very famous company um >> LG Lenovo. They put them in their own custom >> computers or servers, right? And then we choose from those manufacturers, >> okay?

>> Who we're going to buy the service from, what sort of bill of materials we want in them. So like the network cards that we want in them, um the switches that we're going to buy alongside them in order to connect them all together into very complex training clusters, which we can talk about later. But um essentially we take those servers, we install them in data centers that we've identified and leased that have a lot of power, a lot of water in order to cool these things.

>> Our real estate company sells data centers here. But that's about [laughter] as close as we get to the you walk in and you're like, "Oh, wow. There's a lot of machines." Like how do they keep it cool? You know, >> so I mentioned that you still need humans in a big way in uh AI, right? And what I meant by that, one of the reasons why I meant that was uh there's only a very select few amount of people on earth that have ever put together high performance compute clusters to begin with. I mean a lot of people in the national labs were like the only people that ever did this prior or in academia.

But now we have you know companies like Cororeweave uh OCI um the hyperscalers have started to do these training clusters themselves right and then also tensor wave it's a very short list of people that have training clusters at scale >> and so yeah >> and let me let me touch on AI because you guys are at the GPU side um I you know you you it it seems to me again you know kind of an outside observer. There's a lot of fear now coming with AI or job replacement. Um, but maybe the tech industry isn't doing a good enough job explaining, well, hey, here are the benefits coming.

>> So, you're a lot closer to this than I am. Fast forward 10 years, what are some things an audience member should expect that AI I know we're, you know, we're kind of making bets here a little bit, but what are some of the things that maybe 10 years from now they could look forward to where AI actually is going to be able to add value to their life? And it could it could be from a software, it could be robotics, but just 10 years from now, what is what does how does life look different than it does today?

>> Yeah. I mean, I think a lot of uh menial tasks in the home are going to be automated, you know, with an Optimus like robot, you know, >> we won't have to be arguing with our significant other about who's going to do the dishes or uh you know, >> make the bed stuff like that. >> Uh I think that would be really normalized. Also, um you know, we've been talking about this dream probably since the Jetson's show, but uh >> uh cars.

>> Yeah, >> we wouldn't have to drive them. I mean, that's going to be an obvious one. Another um probably universal communication. I think language is going to be solved. You know, like an episode of Star Trek where everyone speaks the same language. I think we'll be able to understand any language easily because the translation will happen so quickly. >> So quickly. Yeah. >> Um I think those are some lowhanging fruit on how it will impact people on a day-to-day basis. I mean they could plan out their life. They could have a concierge doctor. every single person can have a concierge doctor because, you know, we have all of human knowledge and medical journals contained in, you know, small little chips and spaces for people to talk to and communicate with.

>> Yeah. You know, it's interesting. Right now, there are laws um or regulations in place against automated driving. And uh my we have a Tesla in our family and I occasionally get to drive. It's my wife's kind of day-to-day car, but you put that auto autopilot on, it's it's it's it's amazing. And you you sit there and you think about all the changes um that that will bring and right now the regulations are not against it, but I was like, you know, fast forward 20 years, there might be regulations against humans driving. Like, hey, why were you driving? Yeah.

>> Right. I don't want you dangerous, right? >> The state or the, you know, doesn't we don't want you to drive. We want >> the software to drive because the accident rate is a close to zero. Um, and then what does that do to insurance premiums, right? Like all of a sudden, how does it affect insurance companies? Um, just all, you know, there's so many like second third level effects. >> The greatest analog we have to that is uh commercial aviation.

>> Yeah. >> I mean, 98 99% of uh flight is conducted by computers. >> Yeah. >> Right. And then landing and taking off is basically where the pilots come in and only landing in uh very good conditions. As soon as it's uh

you know too cloudy or foggy, the computers land the plane. >> Yeah. It takes over. >> Well, so let's talk about you. You grew up in the Bay Area. >> Yeah. >> Right. And then you moved to Vegas for college. But were you always, you know, as a kid, were you always into technology? Was that something you just had proclivity to or is that something that came later? Yeah, I have uh really really early photos of me uh in front of a computer uh doing things, staying up all night.

Um in middle school, I took on the responsibility of running the entire school's uh computer lab uh unspoken sort of and I kept getting out of other classes cuz uh the computers would break and I was the only guy that could come uh fix it. It was pretty fun. So, what do you mind if I ask what your parents did? Were they >> My parents? Yeah. >> Were they Were they in that space, too? >> Um >> because it was like Silicon Valley, you know.

>> Yeah, you're right. Um my father is uh um a marble contractor. >> Okay. >> And my mom actually was a IT desk. >> There you go. >> Person. Yeah. You got it from the mom. Because I was going to what I always like to explore in these these shows is nature versus nurture, right? And and you could say, "Oh, well, my dad was a software engineer and you know, he he pushed this on me and I had a proclivity." So, yeah, okay, that might be more nurture, but yours certainly, you know, maybe some nurturing for your mom, but it might be just nature. You were always wired to, you know, from a tech from a technology standpoint, you look at a computer, it just spoke to you.

>> Yeah. I mean, we I spent more than my fair share uh with a computer. Uh, in fact, probably too much, but yeah, it was good. >> And so you you go to UNLV and to study, right? >> Yes. >> What was the name the degree? >> A computer science. >> Computer science. So then that that's just right down the middle of the road. You're going to become a software engineer. Is that >> what it leads to?

>> I mean, uh, >> didn't have vibe coding tools back then? >> No, not at all. I was fortunate enough I mean, you pointed out I grew up in the Bay. Um, so there were a lot of uh role models around that were in computers from a very young age. Um, you know, friends, dads, >> yeah, >> what have you. My mom was IT desk specialist. >> Um, but yeah, I I really owe me zeroing in on computer science to my high school computer science teacher. Uh, he was incredible. Mark Lanceberger.

>> Yeah. um uh he taught us uh from basic building blocks like with the C language then C++ and then Java so we really had a really good foundation uh thanks to him I mean no knock on my university but uh I didn't learn anything accreative until like my third year because of what I had been taught in high school >> because you were so far ahead at that point so all right you're graduating UNLB again outsiders you know, why didn't you go back to Silicon Valley?

>> Yeah, why not? >> Yeah. >> So, uh uh dad had moved to Vegas in 1992 and um found a successful life uh here reinvisioning the strip by installing a lot of marble uh in all the hotel rooms, right? But um the real reason I didn't leave was uh I met my then girlfriend, future wife uh at UNLV. She was also studying computer science and uh her whole entire family was here. She's born and raised Las Vegas, which is very rare.

>> Yeah. >> But uh yeah, I couldn't I couldn't up and leave after that. >> What was your first job out of college? >> Um I joined a green energy startup. Uh one of my professors had started right before I graduated. It was really uh really fortunate because uh graduating in '09, there was not a lot of uh entry-level jobs open in the deep depth of the financial crisis. >> You should have been in real estate, dude. [laughter] >> It was bad.

>> So, uh he he basically asked me if uh if I wanted to join his company. I said, "Sure." Um, and I learned right away the joy of uh, being able to do many different things at a company, whether it be helping with articles of incorporation, building the website, driving a big forklift uh, all night or going out into the middle of Nevada desert and uh, collecting samples of a tailing pile on a mining site. All things I did in this first company.

>> That's the that's the beauty of a startup though is like >> it's crazy, but you really you wear so many hats and uh you can really learn a business from the ground up, no pun intended. Um when did you know though that instead of just working for a company, you wanted to found one? >> Yeah, it really uh I was a bit of a blackhead. Um meaning like my dad was sort of living the American dream and I didn't even see it. Um he, you know, was entrepreneurial, had his own business, uh controlled his own schedule. I didn't even think about that. I was like so focused on just building uh a career and a white picket house type life, you know, be like all those uh >> all those dads that I saw in Pleasanton where I grew up, you know, commuting into the city, pounding out code all day, coming home and having suburban life or whatever.

>> Yeah. Having having a good compensation and and job security. Job. Yeah. >> That's all I really saw. uh even those right in front of my face with my father. But uh the startups that I start that I joined and started be able to help as an individual contributor. Um finally I was you know I was working my way up um into leadership roles and then always felt like I could contribute more um if I were only given the agency to make you know larger decisions or >> if only I knew um >> what led to you know this problem that we were having. You know if I was in the room maybe I could have avoided it. Was that was that the ultimate driver saying, "Hey, I need to be the captain of the ship."

>> Yeah. >> And and what what was the moment where you said, "I'm going to do this." And and I think influential was your >> I mean influential was my second >> Oh, your second. All right. >> Co-founded company. >> What was the first? >> Uh Active Side. >> Active Side. >> Yeah. It was uh basically a social media company where uh people would post about their active life. what I mean by your active life like uh weightlifting uh playing um archery, basketball, golf, things like that. So, it was like a it was like an Instagram for your active life >> and uh >> we had a lot of success and I had one of my really early learnings. Um >> I was about to ask you my next question was like what was that first big >> early learning moment, you know? Well, I mean sometimes you win and sometimes you learn, right? You don't fail.

>> Yeah. Um the early early learning was uh if you don't ask meaning like if you don't go out if if you're a startup founder in Nashville or Vegas if you don't go out and uh share your idea or ask VCs in the Bay Area about it or share your metrics and get feedback you're only holding yourself back because you don't know how you're going to be received. So, what I mean by all this is we had an incredible amount of users. Um, like 60,000 in our first, I don't know, two months. Our our cost per acquisition was like 2 cents.

>> Um, [clears throat] all things that were incredible, but we didn't know that. We were like holding ourselves back. We're like, "Oh man, we're not, you know, hitting the numbers like Facebook is. There's no way that anyone would give us any money." Now, in hindsight, I know we were completely off our rocker and we could have went and had like a substantial uh company just based of our metrics, but we held ourselves back and we [clears throat] didn't go out and do it.

And as such, we ran out of money and and closed the company down. >> But but like you said, you you you either win or you learn. And >> yeah, >> what how did you is it as simple as looking back and saying, why did that happen? Or do you go to talk to people like in football >> after the game you go watch film, right? >> Right. Whether you won or lost and okay, you had a bad loss, right?

>> You just go and you put the film on and it's pretty quickly you could see, oh shoot, like I I know what I did wrong there. What What is watching the film like after a startup fails for a tech entrepreneur? >> Yeah, it's uh I mean admittedly it could be an extremely uh hard thing to do. It's humbling. >> You don't want to think about uh something so visceral. >> Uh for me, it was in the process of uh fundraising for influential.

>> Where uh we went So, by the way, uh we created a influencer marketing company before anyone knew what an influencer was. >> Yeah. >> Right. There was no coined terminology in 2013 for an influencer or a creator. >> Yeah. Tell us about influential. Um yeah, sure. So um essentially what it ended up being um is two parts of the business. One part was a SAS platform where we indexed millions of creators on the internet every single day, meaning um what they post about, what their audience demographics look like, um what their audience psychographics look like. um what the influencers look like aesthetically so that we can find similar looking people for brands.

That's very especially helpful for brands. Also um filtering their content for profanity uh basically brand safety. Um making sure that they uh properly disclose that they're influencers meaning uh # FDC, you know, # ad all these things. Um anyway, so we combined that all into a tech platform. [clears throat] So you can think of it, the easy way to say is we built like a Google for influencers that brands and agencies could subscribe to in order to find >> influencers or creators >> marketing distribution channels effectively.

>> Exactly. And so um we ended up being uh the influencer agency of record for like all the Fortune 500 towards the end of it. And then the other side of the business was a white glove uh campaign execution business. So like yeah we we built a tool for brands and agencies if they wanted to do it all themselves they could use this software tool to identify influencers or they could execute the service or they could hire that side of our business to go and execute and do creative. And part of how you and I started talking about influential was going back to your first company in the process of raising money to launch influential that was again just was that kind of was part of the challenge of raising money people ch you know challenging you to say well what happened and why won't it happen again was that was that >> actually I mean they they never really did dig into um actor side what they what what I realized in the process was my co-founder at the time, Ryan. He was relentless >> and we took hundreds of meetings and took, you know, if we took 500 meetings, we got 499 nos, right? And uh but each time we got feedback and we iterated on the pitch, we iterated on the product.

>> Um why are people not understanding the power of influence? It seems self-evident now uh sitting where we do today that there's power behind creators and influencers, right? But at the time, trust me, people are like, >> "What are you talking about?" >> Yeah. >> You know, a mommy blogger is going to have more share of voice than >> It's crazy. I mean, just in the last couple years have I even become aware of this concept. And I I was first as a again as a normal guy, I was first introduced to the idea almost through athletics. Like I I remember the moment when I figured out that like LeBron James or Patrick Mahomes, they were making more money from their influence than they were from their contracts.

Right. >> Right. >> Right. And and then you know that you start d you find a mommy blogger who has a million viewers and she's making a couple million bucks a year like you know pushing uh clothes you know in her stories and I I couldn't believe it you know and this was just a couple years ago. So what you say 2014 I was >> way ahead of its time. Almost too early. Almost. But >> actually great time.

>> That's right. Almost too early. That >> you almost you almost made these survived. What's it What's it like to to go raise money? You know, it's um >> um [sighs and gasps] >> It sounds exhausting. >> It is. It is. I mean, you have to be, you know, the best salesmen know how to hear hundreds of nos, right? It's the same. >> You try making 250,000 cold calls in your life. You get you get used to you get numb to it.

>> It's the same thing. >> Becomes a game. >> It really is the same thing. Like, uh investors don't like to be cold called either. And I think human nature um we we want to feel like we're being approached in an organic way. >> And I think I mean some things that I've learn if you if you can you should meet people before you need something from them. >> I think that's another learning. So meaning like can we go have a coffee >> and just talk about how the weather is, what type of investment build, you know, build rapport.

>> Yeah. >> So that when character >> timing does align and they get to know a little bit of your character. It doesn't feel like uh you know [laughter] there's someone just coming and panhandling to you. You know, >> influential had a had an exit. It was private. >> It's a public exit. Yeah, >> it was a public. Okay. [_] [_] Um, >> well, I'm sorry. We didn't IPO. What I mean is it was in the press.

>> Yeah. Oh, yes. Sorry. I was like, I didn't know what public kind of research is this. >> But, um, again, you don't have to disclose details, but I assume that was a very big moment for you personally, uh, professionally, economically. What is what is that feeling like that liquidity event where you know couple years before and in real estate it happens over longer periods but you had this idea and you believed in it but you know is it going to come to pass you never know and you actually you know go through the process and the sale closes like what what is that day like first of all do you get like a phone call and you know is the wire sign up but like what's it like to >> that culmination >> um So the the interesting thing about um venture capital uh startup founders is to to a layman or to just a normal member of the public or of your team or what have you, um you're perceived to be way more successful than you are before you ever get a lot of money in your bank account.

What I mean by that is you could be a founder of like a series D company that's raised hundreds of millions of dollars and your company's doing phenomenally well and you could and I've met many of them not be worth

even you know 300k to your name in your bank account. >> Put Yeah. Putting aside because you're paying yourself 200k a year. >> Yeah. In your living and you haven't had any like liquidity. Yeah. >> So, so you're leading this incredible company.

>> Yeah. They say, "Oh, you're a founder. I just saw your company's worth half a billion. Oh my god, you must It's like, dude, I got like 110 grand." I know, which is most >> It's a lot of cognitive dissonance. Okay. >> And so >> the moment that you actually get it in the bank, it is uh a relief. >> Yeah. >> It's a relief. >> Is that what you felt? >> Yes. Immense relief. And also uh I mean it's a journey my wife and I took. I mean, she um really was the backbone of our family that allowed me to take on all of the risk, meaning, you know, putting uh payroll on a credit card at different times and her having her own career and being able to support um >> say when you'd come home and you're like, "Yo, check out this code we did."

And she's like, "That code sucks." >> She's geeking out over zeros and ones, you know? >> But like she really allowed me to take these huge risks and uh of course you have moments where you you're like, man, is this ever going to pay off? >> Yeah. >> You know, and when it does, I mean, it's it's super >> um relieving and also it's another unlock to your personality because you feel like it's it shouldn't be a redemption arc, but you feel like, oh man, >> I invested in the right thing.

>> Yeah, I did. >> You know, and it did. It's okay. Yeah. Valid [laughter] validation, right? Yeah. you're like, "Okay, I guess I'm not that bad." >> And of course, it doesn't hurt to have money >> and know fun coupons. >> Yeah. >> Um, >> what's it like going through an acquisition? What are what are buyers looking for in companies? You know, you you hear about the attachment to a founder, but how >> you know you you part of selling is I don't want to be at this company forever, you know, to go on and do other things. In this case, Tensor Wave, but like what what is that process like of of being acquired and then >> what are they? I mean, I was uh fortunate enough to not be in the day-to-day anymore when it when it happened, so I didn't have to like do a golden handcuff type thing, but um I was in many of those rooms where we were running a process at um influential and the things that they were looking for were actually things that founders don't really think about that often, which is uh robust, repeatable able processes within the company. Uh meaning they're they're they're looking and they're seeking um something that they can buy that the removal of the founders doesn't, you know, mean that the company stops.

>> Yeah. Hit by bus theory. >> They want to make sure that there's uh yeah, foundational repeatable processes, uh real revenue, audited financials. >> Yeah. That whole thing. >> A lot of boring stuff, you know. 2014 to 2019, five-year period roughly. >> 2014 we Yeah. Okay. >> What was that five years like for you? And and and I'll kind of lead you here from a work life balance perspective. You hear these kind of crazy stories of tech entrepreneurs working you know 20our days sleeping underneath their desk. Like what what was your life like during that time?

>> Yeah, I'm I'm sorry to say there was no balance. Um, >> that's the answer. Yeah. >> Yeah, it's definitely, but at the time, I mean, let's let's frame this also. I was in my 20s. >> Yeah. >> Unlimited energy. I was uh coding until the sun came up. I would take a nap and then wake up and do it some more. >> Um, jump on the plane for an

investor meeting like non-stop. Non-stop. And again, uh, God bless my wife.

>> I was gonna say because you said your wife was [laughter] >> was the backbone. Um, >> yeah. >> And and what was your why at the time? Like what was really driving you? What what created that level of insane commitment? What what was the fuel that allowed you to power for 20 22 hours a day other than Red Bull? Hopefully. >> Yeah. Shoot. Um just wanting to be a part of something bigger than myself just like uh that impacts many thousands or hundreds of thousands or millions of people. I mean in our case our our advertising campaigns uh you can say that we were uh you know selling candy to kids. I mean who cares right? But it was it was pretty cool.

>> Yeah. >> Building something that had impact and changing an industry. Um you know >> Yeah. A little disrupting >> from radio ads to >> radio >> influencers and creators. Right. >> That's right. Yeah. The um I was traveling with my kids a little different. I was traveling with my kids the other day and there's you know TV's on and commercials you know there's no commercials anymore and they're like why what are these things? Why do they keep popping up? I was like, "Those are commercials and that's just something you had to deal with." You would do like, "Hey, I'm going to go to the restroom at the commercial break."

But like, yeah, radio ads. They would play like four songs and then you get like eight ads, you know? >> That's just how it was. Um, all right. So, you have this super successful event. How much time did you uh, if any, did you take off? None. You're just shaking your head. No. >> No. I was I was already doing this. >> Really? >> Yeah. See, you asked me what happened the day that the deal closed. Yeah.

>> I was in a basically a bunker checking out a data center site. >> So, like I didn't have cell reception. >> We were >> literally in a place, a Faraday cage type place where no reception was coming in and out. And I and I come out um from this bunker, I mean a building, and my phone just absolutely goes insane. Um, apparently I had missed it by like an hour. Okay. And I opened it up and I mean Derek was there. Um, and there were many other people there. They they said that I looked like dumbfounded, you know. I didn't know what to do. Just a smile on my face, you know. So, uh, I was already here building this company when I got news that uh, uh, Influential had sold finally. Yeah, >> that's wild. You just >> so no no no no no no no break >> no break. [laughter] Jeez. And so and so you launched Tensor Wave December 2023.

>> Yes. >> And you know one of the things you you touched on if I heard you correctly is like you remember that moment the first time you got on Chad GBT, right? >> Yeah. And um it just seems like maybe right away it kind of spoke to you like you saw there was something massive coming and then you kind of figured out where in that space that your background, your technical skills or you just said, "Hey, this is where I think we could be wildly successful."

>> I think it's it's a little bit different than that. Um, I mentioned it a little earlier, but I I started a nonprofit called Startup Vegas >> to connect investors with entrepreneurs locally. >> And I was also investing in companies as a GP at the time. Um, and Jeff, one of the co-founders here at TensorWave, came to one of my events and we became really fast friends and I got to learn about what they were doing in FPGAAS and I got to

meet Derek and uh, through that whole, you know, process of getting to know each other, I got to know, you know, the ins and outs of infrastructure where I had never been exposed to that before, right? I was you were more on the purely software as opposed to the hardware.

>> Right. >> Yeah. >> And um I was able to bring my experience meaning fundraising um successful companies and sit in a different seat than I had before because I had never been >> uh a COO. I'd always been a CTO or a technical co-founder. >> Yeah. But I could apply different things, you know, to the notion of wearing many different hats. >> Sure.

>> Yeah. Because in your previous roles, even though your title was CTO and certainly that probably was the meat, you you you definitely had operations in you had um experience in the operational side, especially that first company like doing all this crazy, right? What was the first big moment at Tensor Wave where you said, "Oh, this might actually work like this might be big." I mean, the day that we um were announced on stage uh by AMD CEO as a launch partner for their MI300X series, which is what we have here on the on the table. Um the amount of cold inbounds we had on our website and our website was literally just a landing page with like a form. I think we had like 300 >> just the demand >> and I was like this is unlike anything the appetite has seen before you know and also >> we were able to get a couple of signed letters of intent within like >> I don't want to say hours but days you already had like you just see >> immense traction whereas [clears throat] somehow in other businesses it's like you have to like fight and fight fight first little you know nugget of traction and you keep going right >> but I don't want to say that it's been easy it's just different very different but yeah starting from the first moment >> I mean you know everybody's talking about AI models whether they know anything about them or not and and now we're really starting to see an introduction into the actual infrastructure the hardware and what powers them um specific specifically on the energy side, right? But what what is the what powers compute? Why, you know, what is it about these things that that's kind of making that, you know, dealing with being one of the most critical resources in the world and the power that drives it, you know, because you you're starting to see like city council is like, "Oh, I don't want this data center because it's going to drive up my power." And then now you're starting to see these, you know, I think it was Meta or Blue AL, you know, saying, "Okay, we're actually going to build our own power plants or something to that effect." Like this is where it's really coming into the lexicon of like, you know, average everyday Americans above and beyond just the language model. Like what is it about these things that that just makes the resource of power so critical?

>> Keeping them cool, right? >> Yeah, that's exactly right. So, um I mean these chips are very large. This actually here's a really great this huge I don't know if people can see us >> but uh here's the chip and this thing that I'm holding to the right by comparison is the heat sink for an air cooled uh MI300X. Okay. Now, this was the last generation basically that you could cool with air because they get so hot you can't pass enough air over a heat sink to keep it cool.

>> So, they move to direct liquid cooled um clusters which they just pass uh water over a cold plate over the the GPU. Um, and in order to keep uh water cool, you need you need a lot of energy, but also the thing that's creating um heat also requires a lot of electricity. So, it's >> there's a lot of power. Yeah. Um and even though every successive generation has become you know an order of magnitude more efficient in terms of how much

power it's using the demand from a compute perspective is going absolutely haywire and and unbound almost. So meaning you know there was this scare uh in the industry in was it late 24 I think or I don't know. Everything blends together. But I'm talking about the Deep Seek thing where >> uh you know these Chinese model makers made a very efficient model.

>> Efficient model. Yeah. >> All of a sudden and everyone was like, "Oh man, there's not going to be a need for GPUs anymore." I mean, we've solved it, right? >> Yeah. It's it's instead of I think the American models looked at every word in the sequence. I'm going to do my best to explain this. to see it. You tell me how often every word in the sequence and the relationship to the next word while the Chinese figured out how to like isolate little ones. So the amount of energy required I don't know was a factor of 16th. So we'll need 116th the amount of GPUs or some something to that effect.

>> Yeah. >> And turn Yeah. Yeah. >> Yeah. It's it's >> or the demand is so great that even if it really did create efficiency, the increase in demand has completely overwhelmed even that increase in deficiency >> because because around that same time, if you recall, um there was a discovery that the more time you let the L&M quote unquote think about a problem, the better the result or the more accurate the result that comes out the other side. And so all of a sudden all the models started to think quote unquote, right? And so they take more compute even though they had this efficiency that they gained. They overcame that, right? And the demand keeps coming and coming and coming. So >> what do you see as the biggest opportunity in your space, let's say, over the next 24 months?

>> Is it is it just doing more and just more? >> I mean, keep it simple. >> Yeah. >> Uh dummy or whatever, right? Like we need to I don't mean it to you towards you. >> I think it's keep it simple. >> I'm saying it to myself. We have to >> I think it's keep it simple stupid. >> That's right. >> Keep it simple stupid. You know, like just deploy as much of this as we can while we can identify sites, get them to our customers. Um create long-term value and contracts for ourselves, our customers, everyone. Have you thought about going a little real estate here? Going on the principal side and buying your own land and building your own centers and all that because I know a good brokerage company to we could talk offline about that.

>> Okay, great. >> But yeah, you're thinking about getting on that. >> We are. We are. >> Interesting. >> Because uh I mean to your earlier question um or statement that I think you said Blue Hour Meta declared that they'd be building their own power generation. I think everyone that's in our space, you know, at the scale that we are at and that we hope to achieve, we're all going to have to do behind the meter generation. Um, not only because of the concerns that, uh, normal citizens have about power, but simply because the utilities can't keep up with >> just not enough power. Yeah.

>> Needs to happen. >> Yeah. So we all have to create our own power generation solutions whether it be uh you know not gas powered or you know there's a burgeoning field again what's old is new again the nuclear field >> I was going to say nuclear is yeah nuclear seems like these smaller I don't know if they're like gen 4 or whatever they call it we just because of the environmental lobby for the last 50 years nuclear has been like no you can't do nuclear but I think they're I mean you want to talk about clean energy outside of a meltdown like that is like in

some ways the as clean as it gets. So yeah, it'll be fascinating to see and like you know I'm a free market believer. I I feel like the problem will be solved as many problems in the past at least in this country by ingenuity and American capitalism and and the free market. It's like individual companies in the pursuit of being successful turning profit saying yeah we need this power but we'll actually we'll actually build the capacity we need. We're not going to rely on the government to do it. though that would be nice if they helped.

>> Yeah. >> Right. >> Very much. >> You guys um I didn't go on Crunch Base and look this up, but you do a seed, you series A, >> not series B. >> You know, you you raise capital to accelerate growth. Uh and in technology, it's >> you know, it's 12 to 24 months and slower businesses like mine is a lot longer. What what is the the vision for Tensor Wave? Like is it a big exit? Is it just keep it going in perpetuity?

Like where do you want to take this? You and your co-founders of course. >> Yeah. Um [snorts] this company needs an incredible amount of uh capital. Um just one of these that we have sitting on the desk is like \$30,000. >> So this this chip is \$30,000. >> That's right. Oh, sorry. >> And there's eight of them. There's eight of them >> in in in the generation that this came out. There's eight of them in a single server.

So 3* 8 turn 240,000. >> Yeah. >> Right. Dollars in one server. >> Um as you can imagine, >> not pesos, dollars. >> It doesn't uh it's it's not like a traditional startup in the in many ways. Number one, in a SAS startup or a software startup, you're spending most of your money on human capital. Mhm. >> You're not spending it on physical capital, leases, um, electricity, things like that. Right. And so >> we pay for our human capital with the revenues that are coming off of our, you know, installations. Sure. Right. And in order to accelerate our deployment, we can't go and fund this business primarily from venture capitalists. That would be impossible. we would be diluted to nothing, us and our employees. So, we have to leverage debt.

And so, that's yet another new component to the capital stack in a company like this, >> is that you have to go gain the confidence of a customer, get a really great uh offtake contract, meaning something that they commit to for a number of years, I can go turn around, take that >> to a finance year. and borrow against it, right? But they're not they're not willing to take 100% of that risk. That's where the venture capitalists come in. We turn around to the venture capitalist. We say, "Hey, we have a great deal from, you know, this finance here. They're willing to give us 80% of uh the money that we need. Well, we need to make up that 20%." So that's >> it's fascinating and and how different it it sounds to me than your first two which is all software and this is so hardware.

>> Yeah. >> You know because it's not just the hardware for the chips, cooling systems, then the data centers and the leases. >> Yeah. It's it's very very different. But you know everything that I hear again I'm just a you know an ordinary guy. I'm not in the tech space is is the hardware and the processing is is the opportunity the challenge you know it's where you want to be at certainly the language models but there gosh that I don't want to say it's been commoditized but they're all at least the top four or five are all so good they have their little niches but this thing it's like none of that works without this you know what um what's a piece of advice if you could go back in time and give to yourself you know whatever it is uh 12 13 years ago when you founded your or maybe longer, you know, but when you founded your first company, what's a piece of advice you give to

yourself or give to any young entrepreneur looking to start a company?

>> Yeah. Um, your ideas are not special. You should go out and uh test them with people that you know and don't know and get feedback, more feedback, faster. You know, there's the concept that people say like uh move fast and break things or you know, put out a landing page and see if people like it right away. Like >> the shorter time that you can spend just trying to keep something secret, you know, I think I think that that improves your chances of success.

>> Is that what it is? They they want to keep it. They may not ask cuz they're like, "Oh, if someone likes this idea, they can just recreate." Yeah. >> The amount of people that I've met that think that if they tell you something over coffee, there's going to be someone that overhears it and changes their entire life to go after this idea they heard. >> Like, come on, man. >> Yeah. >> Like, >> yeah, >> no one's going to I mean, >> makes for a good movie. [laughter] >> Yeah.

>> Yeah. >> Uh, it doesn't happen in real life. Let's just put it that way. >> What is the craziest thing that you've ever seen happen in in the tech world? craziest thing >> like where you just people outside the industry would not believe it. There's like no way that those things happen. >> Um I mean we threw a lot of uh parties with influencers and them creators. Um but that's just >> debauchery. >> Yeah. >> Well, other people's money, baby. We're happy that uh you know >> things went the way that they did for us. Yeah. Let's just put it all out.

Yeah. It all worked out. >> Yeah. Looking If it didn't, >> you're young. You're in your 20s. >> If it didn't, you look back and be like, "Yeah, >> you can paint your own picture of what was there." >> Yeah. [laughter] >> Yeah. But hey, it all worked out. Everybody Everybody got paid. >> Yeah. >> Everyone was safe at the end of the day. >> How how how realistic is the show Silicon Valley? >> Realist I [laughter] loved it. I love that show. Yeah, it was so great.

>> Um, what was it is like at the end of it was like this software that did something for accounting and they just put the tagline making the world a better place and it's like well how are you making world a better place? Like dude, be quiet. Like if we just put this on there, we'll get investors, you know? [laughter] Um, all right. I got I got a question for you. Like what what do you want your legacy? What do you want to be known for 10 years from now?

Um I think uh someone that brought uh a different type of uh job and possibility to you know the desert here in southern Nevada. um economic diversification needed to start somewhere and >> [clears throat] >> uh I think it'd be really great to be remembered here in our community as uh >> you got to come up with a cool name like Silicon Valley come up for something >> I know right something >> um I asked your motivation your why earlier u being part of something bigger than yourself certainly you know financial anxiety is always a big driver for our guests especially early in their careers but what what drives you today like what's your why going to make assumptions that, you know, more more money is always fun, but like, you know, you're going to be okay, you know. So, what what is it that really >> gets get you to work as hard as you do now?

>> I mean, now it's changed. I I really love seeing uh people that I'm working with grow um achieve, you know, the things that they want to achieve. Personally, um I love investing in other people's ideas and helping them uh not have the same uh you know issues or problems that I did. Um basically just paying it forward in a way, but also um I can't imagine myself sitting around doing nothing. Uh I I get bored really fast, so I really want to solve hard problems every single day. And if everything is uh a little too smooth sailing, I get get >> hands are the devil's devil's workshop.

That's right. Well, next time you have a really good idea, call me for the seed for some seed funding or I want to get in early. Real estate stuff is boring as hell. >> And I was like, units, rent, turn it, push rents, here's the cap, blah. Boring. >> You know, it's really uh unless you want some data. There's someone that uh said this to me and and it really resonated with me and a lot of my friends. Uh there's two types of entrepreneurs. Uh people that have lakes and people that have rivers. I don't know if you've heard this one before.

>> No. Tell me. >> So like uh a cash flowing business is like a river and a person that has like a big exit is someone that has a lake, right? And they all look over the fence at each other like, "Oh, I have this river over here, you know, but man, my friend has this huge lake, >> right?" And and the people with the lakes are like, "Man, I'm getting bored with this lake. I wish I could get back to having a river again. Consistent consistent cash flow." [laughter] Yeah.

>> Yeah. >> Lake could dry up. >> Yeah. >> I don't know. It reminded me of that like cuz I know a lot of people in VCs and startups you know >> they think about hey what if I had sustained you know >> sustainable cash flow >> call me [matthewsrealestate](https://matthewsrealestate.com) matthews.com great don but hey great domain by the way matthews.com that's my that's my only the only thing I've ever done in technology where I'm like that was me >> you had the foresight >> I had you know hey I I missed my calling clearly [laughter] No, but uh yeah, if you any any founders, VC guys listening to this, you want some real estate, call us. But Peter, this has been great. Uh for everyone listening, be sure to connect with Peter on LinkedIn and learn more about TensorWave at tensorwave.com and follow TensorWave on Instagram, [TensorWave_cloud](https://www.instagram.com/TensorWave_cloud).

And if you found value in this episode, don't forget to follow me on X, Instagram, Tik Tok, and LinkedIn. Just search Kyle Matthews CEO. Catch more inspiring conversations on the Matthews Mentality podcast wherever you listen. Best of luck. You don't even need lug. You guys are going to smoke it on TensorWave. I just want to get an invite to the party, you know, with some influencers. It sounds pretty fun. And I could tell all my real estate buddies I'm, you know, I'm hanging with my tech tech friends and they'll just be like, "Man, I ain't got any tech friends." So now I got one more. I appreciate you.

>> Come visit in Vegas. I will. I'll be back in a couple months [music] for a real estate conference. [laughter] Oh, >> all right, Peter. This would be great. Thank you. Thanks. [music]