CRESCENT COVE

Crescent Cove Conversations

featuring

Mitesh Agrawal

Chief Executive Officer of Positron AI

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What is it and why was it created?

Fundamentally, people do business with people. Our founder series is a place where we can show the person behind the business. It will tell the story of how and why the business was started. Our series will be personal and pointed. Our founders are impressive people. Sometimes, they are following a calling to right a wrong, fill a gap, be of greater service, but in all cases, they have a great story to tell.

We look forward to you listening to their stories and learning more about these entrepreneurs.

Crescent Cove Conversations:
Mitesh Agrawal, Chief Executive Officer of Positron AI

In this series, Crescent Cove invites the insights and life lessons from the founders and leaders we've worked with over the years. Acknowledging there is no 'secret sauce' to success, these vignettes explore the human dimension of high-performing individuals and the companies they lead.

Mitesh Agrawal is Chief Executive Officer of Positron AI. A former quant trader and early engineering leader at Lambda, Mitesh helped scale that company's infrastructure business through the generative AI boom and led the launch of its cloud division. Originally from a small farming town in India, he studied biomedical engineering at Georgia Tech and earned a master's degree at Stanford.

Mitesh sat down with Crescent Cove to talk about his path from tractors to chips, how curiosity has guided each stage of his career, and why happiness might just be doing everything for the first time – again.

Crescent Cove (CC): Mitesh, thanks so much for making time for us. Let's start at the beginning. Tell us about your childhood. Where did you grow up?

Mitesh Agrawal (MA): I grew up in India, in a very small town called Pusad. It had about 80,000 to 90,000 people when I was growing up, which, by Indian standards, is tiny. That's like a town of 5,000 in the U.S.

CC: Fair to say it might be more like a town in Appalachia in terms of services and population density?

MA: Yes, and to carry that analogy further, it was very rural – a farming town. My grandfather was a farmer. In his generation, there was no real focus on education. Luckily, my father broke that barrier and became a doctor. My mother is also a doctor, and she's actually the longest-practicing gynecological surgeon in the town. She's delivered over 10,000 babies across her 30-year career.

I grew up surrounded by medicine, but I never wanted to be a doctor. All I understood of it as a kid was how hard my parents worked, the long nights. Also, in India being a doctor doesn't necessarily mean wealth, unlike in the U.S. We were always middle-class or a bit above, but my parents ran their own clinic. They weren't attached to some big institution.

I grew up talking science and biology with them, but like I said, it was a farming town.In fact, the first vehicle I ever sat in and drove was a tractor.

CC: The first vehicle I ever sat in and drove was a Ferguson tractor.

MA: That's amazing. We had Fergusons, too. I remember needing both hands to move the gearstick and having to stand up just to reach the pedals. My feet couldn't reach if I was sitting down.

CC: That's a great image.

MA: Yeah, India didn't really start to globalize until 1991, so there were few standards, whether in farming or even medicine. I used to ask my mom if I could come along to work with her and watch her surgeries. She'd say, "You're going to see a lot of blood and gore, but you can't faint. I don't have time for that." But she'd bring me along!

I still remember the first one I saw. I was in middle school. It was a laparoscopic surgery using an optical cable. Minimally invasive, typically used for internal bleeding.

CC: And did that spark an interest in biology?

MA: I always loved tech, though mostly in a childish way, like playing video games, although I did teach myself C++. But yes, I had a real interest in biology. By high school, I was deep into it, far ahead of the AP curriculum. I was especially drawn to stem cells. I used to read Scientific American all the time. We had it in the schools, and it was very popular. Back then, it was full of articles about stem cells curing diseases or regenerating organs.

Like I said, I never wanted to be a doctor, because I didn't really ap-

preciate what it took to be dedicated to patient care – the 2 a.m. calls and going in to do surgery that I saw my mother doing – but I loved the biological sciences. Stem cells, genetic engineering. I didn't know it at the time, but I had the engineering bug, the builder's bug.

CC: Tell us about coming to America. What made the decision, and what was it like?

MA: The default path for someone like me would've been to attend a local engineering or medical school. But India in the late 2000s didn't have a strong research base, especially for undergrads. I had participated in Olympiads and even traveled to Australia for some, which was a great experience. But I'd heard about the research culture in the U.S., and I knew I had to go.

I had never been to America, but I applied to biomedical engineering programs because it seemed like a composite of my interests. Duke, Georgia Tech, MIT, Stanford. I got into Georgia Tech and moved to Atlanta when I was 17, just shy of 18. I was four or five months younger than my classmates.

People ask me if I had culture shock when I first came, but I didn't really. I had no real idea about American culture beyond what I saw in movies, but I spoke fluent English.

What I didn't understand was the 18+ concept of legal adulthood. I remember trying to open a bank account with a cashier's check, and they told me I couldn't because I wasn't an adult. I had no relatives in the U.S., so I asked my roommate, who was over 18, if he would be my legal guardian on the forms. He said "yes," if you can believe it.

It was less of a culture shock and more of a procedural shock. Everything in the U.S. has a process. It's structured, operationalized. It's funny to hear Americans complain about bureaucracy. Like, getting your driver's license. It's a pain, sure. But in India, getting a driver's license depends on whether you know the test instructor.

CC: A rare apologist for the Department of Motor Vehicles! Let's drill down on Georgia Tech. You work in tech now, but in undergrad you were still focused on biology?

MA: Yes. In 2009, I started working in genetic engineering. This was the early days of CRISPR, when Jennifer Doudna was doing really exciting work. She later won the Nobel Prize in chemistry. My team at Georgia Tech was trying to edit MRSA to phase it out. We failed, but it was a great experience.

Later, in my fourth year, I started a company with my close friend in chemical engineering. We developed a patented hygroscopic salt solution that could extract drinking water from the air. We got a few hundred thousand dollars from a firm in Austin and built a prototype that looked like a drawstring bag. It could produce about half a liter of potable water. Cool, but commercially useless. For that much water, you could just buy a couple of liters in plastic bottles.

The investors liked it though – it was proof of concept – and were interested in whether we could scale it. The wearable backpack version was no good because you had to bring everything with you. But if you could get something much bigger, if you could mount it on an 18-wheeler and deploy it to a drought-stricken area or a war zone or someplace like that, set it up and let it run overnight and deliver potable water, that was a lot more valuable.

The company in Austin got us this lab to work in, and almost right away we ran into a very popular problem in chemical engineering which is the surface area to volume ratio. As an object increases in size, its volume increases at a much faster rate than its surface area.

We had a real problem with running enough air through our prototype so that the salt could absorb water. We didn't want to use electricity, but we felt we had to try using fans to push the air through, because cooling the air helps the process go faster. We even tried a column design used in the oil and gas industry, with grooves to increase surface area. Still, the most water we could generate was a gallon, and no one cared about getting a gallon of water overnight. They shut us down.

CC: What did you do after the company failed? Did you have your degree?

MA: Yes, I didn't drop out, because my visa was tied to my education. Also, I didn't have the guts to drop out. We had gotten a few hundred thousand dollars and a lab to work in, but I didn't have the sense that this was going to be a life-changing success.

It was, however, my first time learning anything about running a company – organizing an S corporation, opening a bank account, all of that. It wasn't a tech company, it was purely a chemical company, but it was valuable.

CC: Let's talk about how you got into tech. What brought you to California?

> **"We need someone who's an engineer and understands finance, who can talk to other engineers."**

MA: A professor at Stanford invited me to join his lab. "You're out of money anyways," he said, "Come and do the research here, and see if it leads anywhere. And if it doesn't, at least you get a degree." No surprise, the research didn't work, but I did get a master's degree.

By then, I was burned out on research. I'd had multiple failures, academic and entrepreneurial. So I pivoted. I realized quant finance firms liked nonlinear equations, similar to the simulations in engineering, and they paid a lot more. I joined a quant firm and worked on algorithms for fixed-income trading and derivatives. A lot of math. It was good money.

As for what led me to tech: during this entire two and a half years I was working for this quant firm, I was living with one of my closest friends Paul, who is now my brother-in-law, and his cofounder, Thomas. They had founded a company in the chip industry called Rex Computing. (They were both Thiel Fellows – and had dropped out of school at Georgia Tech, which is how we knew each other.) We all moved in together, and that's when I got my first exposure to Silicon Valley.

Through them, I met Stephen Balaban, who had just started Lambda. He used to come over and we would play video games. Anyway, one night in 2016, we were sitting around watching the presidential debate between Hillary Clinton and Donald Trump, and Stephen said that his company was starting to get some traction, but it was just him and his twin brother. "We need someone who's an engineer and understands finance, who can talk to other engineers."

Thomas pointed at me. "Mitesh can do that, if he wants to leave his cushy finance job."

I went by Lambda's office a few days later, and it was literally a Palo Alto apartment. No chairs, everyone sitting on boxes. It's an infrastructure company, so they were mailing things all the time, and all their furniture was just boxes. Michael Balaban was there in his shorts and Stephen was working on something, and I thought, "This is cool."

It reminded me of my startup, post-college. I liked them, they liked me. That's honestly how I got into tech.

CC: This is worth calling out: you came to it through community – through authentic friendship.

MA: Yes, exactly. We were friends before we worked together. I just liked them, and they liked me.

At Lambda, I told Stephen I'd be the worst software engineer on the team. He said, "That's fine, just learn." So I did. I did sales engineering. I talked to customers. I helped with hiring. I cleaned the kitchen. I managed vendors. Stephen wanted to focus on writing code, so I

"Lambda built a great brand just by being good communicator of that knowledge, why it mattered to buy this hardware versus that kind. My background in hardware helped me understand the performance dynamics."

took over external engineering facing conversations. But we were still only five people. Everyone did everything.

That's when I truly learned what machine learning was. In finance, we used to make fun of it, because we didn't know what it meant in terms of neural networks. Sure, we knew what predictive modeling was; we'd give inputs, say this is the current price of the stock, find the real price. But once I joined Lambda, I really got to understand what machine learning is, and, for the first time in my life, my education came in handy. Silicon fabrication – how do you design the substrate for these chips?

I could relate how the machine learning models performed on the hardware. This was about 2017, and most people in machine learning didn't understand how hardware worked at all. One, two, four GPUs – how did that matter? Lambda built a great brand just by being good communicator of that knowledge, why it mattered to buy this hardware versus that kind. My background in hardware helped me understand the performance dynamics.

CC: We interviewed Stephen Balaban for a previous edition of Crescent Cove Conversations. It must have been an extraordinarily exciting time to be at Lamba.

MA: It was. Part of it was right time, right place. We were certainly lucky. But the bigger part of it was we always believed, especially Stephen. He has been doing machine learning since 2012. I was learning from him. He had the vision, the inkling that this is a compute-intensive problem. His brother, too. I remember Michael Balaban said, "It doesn't matter how good the algos get, getting more compute is the way to solve it."

By 2021 and 2022, during the ChatGPT wave, Lambda really took off. We launched cloud services, and I led that effort. We grew a $0 business into one worth tens of millions.

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CC: And is that how you connected with Jun and Crescent Cove?

MA: That's how I met Jun. Crescent Cove has been backing Lambda since 2018. I learned a lot from working with them. Nontraditional capital, asset-backed debt, credit lines. We became close. You almost can't help becoming friends in those situations, when you're working so closely together. It helps that Jun is also just a terrific human being.

CC: But you eventually left Lambda to join Positron AI. How did that transition come about?

MA: Thomas and my brother-in-law, Paul, had joined Lambda. In the 2020s, Thomas left. He's always been a silicon guy – he's designed chips all his life, and he really wanted to start a silicon company. He wanted to build the most efficient inference chips in the world. When he started Positron in 2023, he asked me to join as cofounder.

I said no, because Lambda was still growing, and it was one of my babies. But I had gotten married and in November 2024, we had our first child. Thomas came back. "You already have one baby," he said. "Why not make it two babies in a row? How about being CEO of Positron AI?"

CC: What a pitch. That's some logic.

MA: It was. And it was really tough. There were really two things that brought me here to Positron. The first, and maybe this is a little bit of selfishness or ambition, but I wanted to lead as a CEO. I wanted to drive the vision and direction and be the ultimate fiduciary for the company. From a natural ambition perspective, coming to Positron felt natural.

But you can be CEO of any company. It was the second element that was way more interesting to me: I wanted to work on an underlying technology. I wanted to get into fundamental technology engineering and R&D.

From a pure tech perspective, I could see what was happening in the deep learning models. I thought "This is going to be so cool to power these models." Fabrication was what I had learned in my education, and I thought it would be cool to apply it to this.

Still, it was hard to leave Lambda. Stephen and I went back and forth on it a lot. I remember being really scared to tell him that I'm leaving. We'd grown the company together. Stephen, to his credit, wanted me to be part of its continued growth. You want to be there to ring the bell, you know?

But once you have an inception of an idea, a bug in your head and it's burrowed deep, it's really hard to get it out.

I still don't fully understand all the reasons I left. These are just the ones I can articulate. Maybe something else was happening in my heart, too. But at the beginning of this year, in January, I left to join Positron as CEO. For me, it's been quite a journey to get to this point, but for Positron it's just beginning.

CC: What's the most exciting thing about Positron AI right now?

MA: We actually just announced our Series A today. It gives us credibility, flexibility, and a two-year runway. We are working on this amazing silicon chip to come out late 2026 that can run the latest cutting-edge models, Grok 6 or GPT 6, and run them at a way better per-dollar and per-unit-of-energy consumption level. We are doing that at a pure engineering level. It's been so much fun playing with that.

Admittedly, there is also a little fear of failure, because it's pure research and development. Until we get a chip in our hand, from thinking on a napkin to sending that simulation design to TSMC, it's a 15-to-18-month process. Until we get a physical chip back, we don't know it's all going to work. It's a pure R&D bet. We're going to find out next summer whether we can compete with NVIDIA. I think we will.

CC: Seems like a great segue to talk chip manufacturing in the United States.

MA: Yes, okay, we need lots and lots of energy. Because even the most energy-efficient chip is still just me saying that for a given amount of power, we can get a lot more tokens. But no matter how much we generate, it's not enough. This is a key belief of mine.

There's also a broader mission, and it's a little cliché, but that's because it's true. I deeply believe in onshoring chip manufacturing to the United States. Whether it's Positron or NVIDIA, or some other company that ends up leading, we need an end-to-end ecosystem here. Not just because of the benefits of restoring manufacturing here, but because silicon is intelligence. We should absolutely have full control of how much we want to build or how little, of how expensive it is or is not. I really believe in that.

For Positron, we want to design and build our chip in America. It's great for the nation. That is really needed. And it's hard. It takes political and financial capital. But I believe that ultimately, all else will circle around this, like a magnet.

CC: So what are the biggest challenges in returning chip manufacturing to the U.S.?

MA: Talent. The U.S. should have the most innovative engineers in the world. I've lived here longer than I lived in India. I believe the U.S. fosters innovation better than any other country. Selfishly, I want to build where innovation thrives. The biggest opportunity is to lead the next wave of innovation from here.

CC: Okay, now it's time for our famous final question, one that we ask everyone: What is happiness?

MA: My definition has evolved. At 17, or even at 24 in finance, I thought it was a few million dollars. But now, for me, happiness comes from three things.

First, pure curiosity in my work. For me, that's technology, learning, listening, sensory engagement. Second, I find a lot of joy in games. It can be tennis, golf, Mario Kart. I'm an average player at all of those, but playing brings me happiness. It might be hormonal, but it's real.

Third, and this is the cliché, but it's also true – it's my wife and kids. It's hard to explain. With kids, you get to do everything for the first time again. Maybe that circles back to curiosity. It loops. Those three things for me are happiness. ■

I believe the U.S. fosters innovation better than any other country. Selfishly, I want to build where innovation thrives. The biggest opportunity is to lead the next wave of innovation from here.

Mitesh Agrawal

Chief Executive Officer of Positron AI

Agrawal previously served as an executive at Lambda, the AI unicorn he helped grow from $500K to $500M in annualized revenue, while securing over $1B in funding. He now joins Positron's Co-Founders, Thomas Sohmers and Edward Kmett, to drive the company's mission of delivering domestically made AI compute solutions. Sohmers–a Thiel Fellow and experienced entrepreneur–currently serves as Positron's Chief Technology Officer, while Kmett–a world-renowned mathematician and functional programming expert–serves as Positron's Chief Scientist.

CRESCENT COVE

Crescent Cove is a technology-focused investment firm that is dedicated to supporting entrepreneurs and founders. Established in 2016, Crescent Cove leverages its global network of relationships and insight across markets, emerging industries, and technologies to build businesses and accelerate value creation across its portfolios.

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