



The Deloitte On Cloud Podcast

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Title: A different perspective: The view of a solution architect on cloud and its future

Description: Cloud, and its ecosystem, can look different depending on your perspective. Those in the C-suite often have a different view than those on the front line. In this episode, David Linthicum talks with Google Cloud Solution Architect Sonakshi Pandey about her perspective on a solution architect's role, what different business leaders desire from cloud, challenges enterprises face with cloud and analytics, and the future of cloud. They also discuss her leadership role in Women Who Code.

Duration: 00:20:04

David Linthicum:

Welcome back to the On Cloud podcast. Today on the show I'm joined by Sonakshi Pandey, Data Analyst in Google Cloud. Sonakshi, welcome to the show. How are you doing?

Sonakshi Pandey:

I'm doing great, David. I'm so, thrilled to be here and to talk with all the folks on the podcast.

David Linthicum:

Yeah, it's great to have you here too. I was just looking at your LinkedIn profile before we got on the podcast. For such a young person, great career that you've gotten into so, far. We're doing to get into that and also get into a few topics. So, give us the story. Where'd you come from? How'd you get to Google? What are you doing now? What are you interested in?

Sonakshi Pandey:

Absolutely, absolutely, David. So, I'm an immigrant. I'm currently based in Seattle, United States, and I was born and brought up in India. That's where I did my bachelor's in computer science, and I moved to the United States in 2014 to pursue my master's. And as soon as I graduated, I started my first job at Amazon.com as a software engineer. So, I worked for the forecasting team, and that is where I fell into working with cloud and in data analytics. So, I enjoyed writing code for three years, and after three years, I realized that I'm looking for a lot more thought leadership and a lot more communication opportunities in my day-to-day work, and that is when I discovered tech sales and I found out about this role called solutions architect. And it sounded really interesting.

It was something that really aligned with my thought leadership and communication goals, so, I switched from engineering to tech sales, and I became a solution architect for Amazon Web Services. I worked as a solution architect for three years, and I spent five full years working for Amazon, and at that point in my career, I realized that I need to go out and explore the world outside Amazon, but at the same time, data analytics and cloud computing were at the heart of what I wanted to do. So, Google Cloud made the most sense. So, almost about two years back, I moved to Google, and I started working as a customer engineer with focus on data analytics, and here I am today, I'm a data analytics leader and a specialist, and I work for Google Cloud. My primary work is to help organizations migrate their data to cloud, build their data pipelines, and derive insights from the data using the power of cloud.

David Linthicum:

So, what drove you to data analytics versus focusing on compute and distributed computing systems, things like that? What was the allure of data?

Sonakshi Pandey:

So, as I said, my first job was in forecasting, and that is where—my team was responsible for developing the platform on which machine learning algorithms ran. So, when I say platform, we managed Hadoop clusters I wrote Spark applications, data pipelines to massage the data, and then make it usable by the machine learning team. I really enjoyed that work and it brought me a lot of excitement being able to convert the data and to make it useful. So, that is why I aligned my career more toward data analytics.

David Linthicum:

So, I love the role of solution architect. I think that's kind of the best way to describe it, talk about tech sales and things like that, but the ability to kind of have somebody who's able to make the creative innovations around linking specific technologies to how it's going to solve business problems is not only something that's nice to have, it's absolutely a necessity. And certainly, you've been working with the architecture team and the development team at the enterprise level. They need to have somebody who's able to say, "Okay, what about these data analytics features that your cloud offers, or any technology offers, how does it link with AI, and how does it link in to solve some of the problems we're looking to solve, and the ability to kind of make those maps is absolutely critical to being successful with this technology." Have you found the same thing?

Sonakshi Pandey:

Yes, absolutely. I found the same thing and I realize that tech sales is more about finding what is the outcome that the business wants to achieve and then seeing how we can fit in technology right inside to help the customer solve those challenges.

David Linthicum:

So, what are some of the questions that you ask customers when they're looking at technology, looking to leverage technology as to what the objectives are that kind of lead you down a path as to how technology's going to be implemented or patterns—or solution patterns you're able to leverage around the technology?

Sonakshi Pandey:

So, being a solution architect, you not only get to be technical, but you also get to put a foot inside the business side of things. So, I have had the chance to work with CTOs, CFOs, CISOs in my career, and each of them had a different problem or a different outcome that they were looking to get out of with technology. So, for example, when I've spoken to CFOs, their primary motivation is to cut down the costs and to become more cost efficient to help the organization improve their revenue model. I have spoken to CTOs. Their primary goal is to get innovation in the organization and to ensure that they remain on top with technology, they don't fall behind as compared to their competition. Directors and VPs—their primary goal is to ensure that operational burden of their teams is reduced and how they can get maximum efficiency out of the team. So, these are a few patterns that I've seen across business and how they want to leverage cloud and technology in their day-to-day lives.

David Linthicum:

Yeah, I love the response to that and the fact they have different answers for different aspects of the business. In other words, some people are focused on operations, people are focused on revenue growth, people are focused on the strategic use of technology to bring more value back to the business and really kind of defining what the technology, ultimately, is going to mean for them because that's a better answer than saying, "Well, it's just going to do good for the business. Well, why? How? What are you going to do? What incrementally can you do to add value into these systems and why am I leveraging cloud over some of the on-premise systems?" and kind of answering those questions. I think it's an imperative right now, and you kind of framed it in a great way. I thought that, ultimately, different aspects or different values that kind of come out of how you're going to answer these questions. So, what

can others learn about the solution architect path? What are some of the skills they would need to do it? What kind of motivated you and gets you excited about it?

Sonakshi Pandey:

So, let me first start by talking about how I actually got into tech sales. So, it all started when I was an engineer and I was looking—I was trying to understand more about this new SQL database and I came across a YouTube video, and the speaker of the video really—I got so, inspired and so, into the video. The speaker was really captivating. He went from a 100 level to 400 level, and he gave a really gripping presentation. After I saw that presentation, I told myself I want to be doing exactly what that guy did. I want to talk about technology, go from 100 to 400 level, but at the same time be a great—be great at that communication. So, that is how I began my journey, and when I looked up more about that person, I figured out that they are a solution architect, and then I got curious about the role and I decided to move into that direction.

Now, here's the thing. I was a software engineer. I already had experience—hands-on experience with cloud, so, I was definitely very, very strong with respect to cloud. But I had never worked with any external customers, so, I was lacking the sales acumen required for the job. So, I had to work a lot. I had to train myself a lot to develop that sales acumen. I read a lot of books. I got mentors who helped me wrap up on the sales acumen side. I also shadowed a lot of senior architects when they had calls with their customers to learn about how they talk to customers and how they talk, even though in spite of being technical, they talk to non-technical audience. So, I had to put in a lot of work. And after that, I think my journey was pretty smooth. I was technical, I developed sales acumen, and I started killing it at my job.

Now here is what I want to share with people about moving into the tech sales domain. The first thing, the first learning is tech sales is more about breadth and less about depth. So, what this means is, as an engineer, I went in-depth into a few products. I knew each and every API. I knew best practices, I knew monitoring, I knew logging, all those things. As a solution architect, you are expected to have a high-level knowledge of not just one or not just five but 10 or 20 products. So, breadth is really important as compared to depth. Learning number two is the cloud domain is changing super-fast. Cloud providers are adding new and new products, new and new features to the existing products, so, you have to keep up. You need to stay up to date with the market. Learning number three, get certified. A certification helps you build your trust when you talk to your customers. You don't always have to go and get a professional level certification, but at least even a foundational level cloud certification based on your role definitely helps because, what you need to remember is it is about sales, but it is in the tech domain, and certifications help you establish your tech credibility.

My learning number four is you have to always—it's an art that you learn how to influence people and how to be good at communication. So, it happens as time passes, you get better and better at it, but always remember that it is one skill that you always need to keep working on.

David Linthicum:

I love the fact that you talked about the breadth of understanding because, ultimately, architects have to understand a lot about a lot of things. It may not have to go in depth, in other words, not have an API-to-API comparison and analytics between one cloud service and another, but the ability to kind of understand what they do, and to your point, explain it to a customer in English terms so, they can understand where the value can be gotten on this particular technology. This is why we're leveraging it, this is the business reason that we're doing it, and this is the mechanism we're going to employ that's going to get us to the end game to adding more revenue and adding more value to the business. What are your thoughts on that?

Sonakshi Pandey:

No, I think that's pretty spot on, David. That makes sense. That's pretty spot on.

David Linthicum:

So, let's talk about data analytics, data and analytics, and talk about it as a problem space. Been looking at this kind of growth for a number of years, and the ability to kind of understand how information is core to the importance of the business and the ability to get information right, and get the analytics right, with the proper processes around it, is going to provide much more value for the amount of money being spent on both technology and people. And I think any other investment in technology, and certainly people—with the rise of AI, and now generative AI and things like that, you really can't separate AI-based technology and data. They're codependent, for lack of a better word, but you need data to have good AI. You need AI to have good data. But this, ultimately, is rising up in importance for the enterprises out there in terms of how to leverage data in a way that's going to be a massive force multiplier for the business. What's your take on the data analytics problem?

Sonakshi Pandey:

Absolutely, I 100 percent agree with the growth of generative AI and everything, but I think the key problem is that I have a lot of data, but I want to get value out of the data, and that's exactly what customers say, that they have these huge databases, data stores, data warehouses, but they fail to get any actionable insights from the data. And I'm going to talk about a few key challenges that I have seen with the customers on what hampers them or hampers their innovation.

The first one is they do not have sophisticated data teams in place who can help them convert their data by building a pipeline into something actionable. We can help them cleanse the data and get meaning out of the data. That's one thing, lack of a sophisticated data team. Another problem that I've seen with customers in the data analytics world is they have a lot of internal teams, and these internal teams do a great job of managing their own data or their own databases. But, at the same time, these teams don't talk to each other, and they end up with a data silo. So, they have all this data, but it's all siloed and no one knows anything about the data on another team, and no one knows how to holistically get value out of the data.

The third problem that I've seen is data quality. So, data quality is when there is—customer has a lot of data. They have to spend a lot of effort to ensure that that data is accurate. Sometimes that same data is duplicated in multiple data stores, and at the end of the day, they just want one source of truth of accurate data in their system.

Other than that, I have seen that customers have struggled a lot when it comes to data governance. So, this means putting proper governance policies in place to ensure that your data is compliant, and even inside the organization, you have applied correct policies to ensure the right people have the right access to the data. And the last thing that I feel that really hampers customers is a ending up with monolithic data lake, so, monolithic data warehouses. Because what happens is, in theory, a data lake is like an unlimited store for all the structured, unstructured data. But what happens is, as the volume keeps on growing and growing, it becomes increasingly difficult to manage, scale, apply security, and actually get meaning out of the data. So, I think these are some top issues that I'm seeing with customers when it comes to data analytics.

David Linthicum:

So, what types of technologies are we talking about with data analytics? What are we looking at specifically? Obviously, databases, but what else is in there?

Sonakshi Pandey:

So, I think that this is, again, a relatively new term. It's called data mesh. So, a data mesh architecture is basically—it's a framework in which you treat data as a product. So, what happens with data mesh is—the main ideology is that the data is old and managed by the time or by the domain that creates it. So, what this helps with is your data ownership is decentralized. It breaks that monolithic data store problem. And at the same time, the individuals who are managing the data are the best people who know how to apply governance on it and how to make it the best quality. And on top of that, another principle that I love about data mesh is the self-serve data platform. So, what happens is the teams are not only responsible for creating data, massaging it, applying proper governance to it. They're also responsible for making it searchable and making it available to other teams in their organization. So, this not only helps with all the issues that I mentioned before, but it also helps with innovation because now as the data is searchable and available within the organization, it will help organizations innovate faster.

David Linthicum:

So, what's the future? Where is all this going? What will we be talking about in five years in terms of data analytics? What's going to be the important technology?

So, I think with respect to data and technology, I have three key things that I really believe in. So, of course, the goal is to put the proper data analytics framework in place and get your data, but what excites me is these three things. The first one is generative AI. We have all seen the buzz that it's created in the industry. It has almost become a virtual assistant that everyone has on their phone or their laptop, but I think it has a super bright future and it is going to evolve—almost all functions. So, for example, software engineers, their jobs will evolve, and they'll now spend less time writing simple software, more time on developing generative AI itself. I think it has a very bright future when it comes to creating art, creating music, creating or designing clothes, and I think it is also going to really help the medical field as well when it comes to developing new drugs, developing new medicines, and finding cures to a lot of diseases.

Another thing I feel is I really love how we are moving toward a little bit of a more web 3.0 culture. I love how it brings a decentralization in place where users are primarily responsible, or they own their own data, and they decide who they want to share their data with. That is really promising, and I think it has a great future. And the last place is, I really love how we are going ahead with this virtual reality and AR/VR world. I think it is already changing the way people play games and education, but I also think that it has a very bright future in giving you all those virtual experiences just from your home. I can't really wait to see all these things in the future.

David Linthicum:

So, the final topic I'd like to cover with you, you belong to a very cool organization, Women who Code. Tell us a bit about that.

Sonakshi Pandey:

Sure. So, Women who Code is a nonprofit global organization, and their mission is to inspire women to excel in tech careers, so, not only their tech careers but also excelling them. So, Women who Code does a lot of events that includes coding workshops, bootcamps, mentorship programs, conferences. They do all these events. Most of these events are free of cost, and the goal is to get women excited about technology and help them move up the ladder in the technology world. I currently work in Women who Code as their cloud-track lead. So, I am the lead of the cloud chapter in Women who Code, and I help them plan and execute these awesome events that I spoke about before that they do. That's what I do. And Women who Code is completely free to join. You can check them out by visiting their website. You can become a member, and you can find the local chapter near you, and you can start getting involved.

David Linthicum:

Absolutely. Join or support. So, where can our listeners find out more about you on the web and keep tabs on you?

Sonakshi Pandey:

So, people can find me on LinkedIn. My handle is hellosonakshi. And they can also look me up on social media like YouTube. My channel is called Talk Tech with Sonakshi.

David Linthicum:

Great. Yeah, look her up. Smart person. Knows her stuff. And, ultimately, we'll be hearing a lot back from her as her career progresses. I'm looking forward to that. So, if you enjoyed this podcast, make sure to like us, rate us, and subscribe. You can also check out our past episodes, including those hosted by my good friend, Mike Kavis. Find out more at deloittecloudpodcast.com. If you'd like to contact me directly, you can email me at dlinthicum@deloitte.com. So, until next time, best of luck with your cloud journey. You guys stay safe. Cheers.

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