GENERATIVE AI'S ROLE IN THE SEMICONDUCTOR

VIDEO TRANSCRIPT

Speaker A: Hello everyone, my name is Padam and I lead data and AI in high tech industry at Accenture. Welcome to our live discussion on transformative impact of generative AI in semiconductor industry. I'm joined by Miles, an expert in semiconductor applications, and today we are driving into how generative AI is revolutionizing the sector.

Speaker B: Yeah, thanks Padam, thanks for having me. I lead our Gen AI and AI for or semi globally. Let's just hop right into it. Padam, could you start us off by sharing some of the insights that you're seeing in the semiconductor space?

Speaker A: There's a lot happening in semiconductor industry today. We're seeing semiconductor industry enabling the rest of the world to leverage generative AI. But these companies are focusing on complex challenges beyond just the basic needs for their own needs. There's a significant push towards enhancing productivity and speeding up market entry. Strategic adoption of these new technologies is a key in driving new innovation. And speaking of innovation, Miles, how is generative AI influencing the R & D process within this industry?

Speaker B: Miles, we're seeing companies, as you mentioned, really introduced off the shelf solutions that enable back office productivity like Copilot and things of that nature. But what's really going to catapult companies into really the competitive space getting products to market faster is utilizing Gen AI functionality across the entire product design lifecycle. So it's not only bringing products to market faster, but it's how can we use not only LLMs but LMMs in the design process to create more efficient and optimized products for their customers? So far, I was hoping you could talk a little bit about how Gen AI is transforming supply chain in the semiconductor industry.

Speaker A: Supply chain is such an important area for high tech industry, but also a very complex one. Generative AI can automate interactions with your third party suppliers. It enables real time substitution based on inventory and supplier availability. Think about disruptions that could happen with a supplier. Are you able to provide new options to your customers in a much more autonomous manner? And this automation improves procurement processes and overall supply chain.

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Speaker B: So moving on to manufacturing. Padam, what advancements are being driven in this area for Gen AI?

Speaker A: A lot has happened in the manufacturing space over the last two decades, but I believe Gen AI is pivotal in predictive analytics. To improve yield and throughput even further, we can use synthetic data to improve model accuracy and do better prediction and managed effects. This significantly enhances the manufacturing processes and efficiencies. So you are producing less crap and building more products and higher quality products. Miles, lets go a step further. Do you want to talk a little bit about the improvements Gen AI is bringing about in testing and quality assurance.

Speaker B: The fabs across the world are collecting a whole host of metrology data. Metrology data is limited in terms of the quantity that we're getting, but what companies can do is they can create synthetic data in order to leverage more efficient ways to look at defects in product nonconformity for things that they're producing now. Taking that metrology data that exists, we can use that as input into future capabilities or future LMM capabilities that I mentioned earlier in order to design new and more efficient products and to make sure that those products are reaching the market not only faster, but they're able to meet new customer demands. Before we wrap up, Padam, could you highlight some of the challenges that the semiconductor industry face in Gen AI adoption?

Speaker A: I'll talk about three things. One of the main challenges is skill gap and resource limitations. Addressing the talent gap, especially in technology engineering but also in governance, is crucial for adopting next gen capabilities. The second one is the fear of unknown, especially with hallucinations and data privacy is huge as well. And the third important thing is building strong data foundation. Deploying responsible AI and governance in that strong data foundation and strategically aligning to business value is very, very important. It's clear that generative AI is a powerful driver of innovation in semiconductor industry. For our viewers, we hope this discussion inspires you to explore the possibilities generative AI can offer. And thank you for joining us today.