Product and engineering officers

Ten product and engineering officers from the Communications, Media & Technology sector gathered virtually to exchange valuable insights and engage in discussions on various topics of shared interest. The meeting was organized based on preliminary interviews conducted beforehand to create the agenda. Through these interviews, two major focal points were identified:

- **Innovating with AI** – Harnessing Opportunities, Managing Risks, and Balancing Workforce Needs
- **Driving Innovation** – Overcoming Challenges and Fostering Growth in a Dynamic Landscape

While all the proposed themes held significant importance, the prospect of AI implementation generated considerable enthusiasm among the participants and consequently took center stage during the session.

AI and risk

Key takeaways

"Privacy is less of a concern because of [our] paid stack, but then there's an IP concern... What is this code? Is this resembling an open-source [model response]? That's still an open question for us... Hopefully, in the next couple of months, we expect that [providers] are going to come back with that answer, because I think everybody has the same concern. My view is, you can't sit there and wait for the right answer. You have to start to experiment and get your team to get their heads around that, because it takes time for developers to understand".

- Cognizant's Badhri Krishnamoorthy introduced the conversation around driving innovation and the influence of AI on the business landscape. Generative AI is a top priority in today's world, and its rapid ascent promises significant impacts on organizational transformation and innovation strategies. Meanwhile, engineering officer leadership is still responsible for maintaining innovation agendas in the wake of the past several years of disruption, necessitating a balance between assertive technology strategy updates with business priorities around cost reduction.

- Leaders shared executive-level concerns about the technology's implications for their organizations. Safeguards are essential to protect business data and avoid leaks, particularly in areas like software development, where some tools have already begun ingesting private information and iterating on it for users outside the organization. While providers like OpenAI offer zero retention SaaS plans, data is still sent outside the organization even though it is not retained for training purposes.

- When implementing AI at scale in enterprise frameworks, proprietary paid solutions are safer than open-source tools, which are where most vulnerabilities are introduced. On the other hand, organizations must take care to avoid unintentionally producing generated content from others' copyrighted materials.

- Accuracy is another major obstacle to organizations fully embracing generative AI solutions. Due to the iterative nature of many AI tools, they may return fabricated responses that lack a factual basis. Should individuals accept generated responses without independent verification, this could cause substantial negative reputational impacts. Informed and attentive users are essential to success with generative AI technologies. Grounding and vectorization techniques are also helpful to minimize hallucinations, directing tools to produce responses on more specific datasets.

Current approaches

Key takeaways

"I've heard anecdotally that some developers are claiming that they are 10 times more productive. So, this whole question about a 10x developer, we believe that the path to that is using these tools. We're not necessarily looking at this as replacing the human, it's really enhancing the human developer. My team is pretty excited about this."

- A participant from a SaaS organization provided insights into currently available tools and the outlook for solutions in the P&E space. GPT-oriented solutions can help organizations establish knowledge bases around their internal content, making information searchable through chat tools for much faster insights. For personnel without experience around data schema, AI generation of SQL queries allows for easier navigation of analytics. In the QA space, generative AI can answer simple questions around measurement data and help identify outliers. AI-assisted software development is another area of focus, but open-source code training introduces concerns around IP, requiring input from legal teams.

- Outside the P&E space, generative AI has proven useful for simplifying patent applications by analyzing Google Patents datasets and flagging relevant IP. This allows for increased opportunities for collaboration and improved efficiency through faster drafting. Those in the media industry are reluctant to directly generate content due to commitments to truth in reporting, but solutions have been utilized in post-production processes, content summarization, translation and speech-to-text transcription. AI voice technology has major implications for broadcasting use cases, and rapid public safety alerts are also of interest, especially as hallucination risks are lower for models trained on specific datasets like weather emergencies.

- Cost is likely to become a key component of AI strategies as organizations continue to navigate the unpredictable macroeconomic outlook. Fortunately, spending for training and tuning models has already begun to decrease significantly. One participant mentioned that newer large language models like MPT 7.5 from Mosaic ML can be obtained and administrated for $300-500,000, down from the nearly $5 million for GPT3 tuning. With the market expanding to include models like Anthropic's Claude, LLaMa and Google's PaLM2, shopping for generative AI solutions is becoming easier, but organizations must examine how providers are changing pricing and licenses. To make progress on implementation without fully committing to any specific model, some platform providers are developing an abstraction layer to connect to a variety of models. This allows organizations to compare models more easily and narrow down the most effective solution for their needs.

Managing change

Key takeaways

"The pace of change is accelerating, in terms of the number of models, in terms of the serving capabilities, in terms of both open-source as well as large language models and smaller models, the cost associated with those models... It's hard to keep up for all of us, so having some mechanism where you're collectively learning through crowdsourcing is quite useful."

- As the pace of change accelerates, organizations must make considerable efforts to keep personnel educated, with one member establishing weekly sessions to discuss development. Hackathons are another strategy to enable rapid experimentation and maintain institutional knowledge. Some organizations are leveraging crowdsourced learning through Slack communities and introducing blockchain-based software development handouts. Enabling sandbox experimentation can support developers as they determine suitability of products for code and testing purposes.

- Fears around job displacement from AI are substantial in certain industries like graphics and animation, as well as in specific roles like customer support, but with most solutions not fully matured, many organizations are approaching the technology as an enhancement rather than a replacement for their resources. Regardless, the dramatic productivity increases that some employees have reported have led executives to proceed with implementation alongside change management outreach. Some teams, particularly in sales, are themselves concerned about losing a competitive advantage if enterprise AI strategy is too conservative.

Cognizant Product and Engineering Officer Forum Host: Badhrinath (Badhri) Krishnamoorthy is Head of Cognizant's Digital Services & Solutions – Communications, Media, Technology & Education at Cognizant. Badhri is a Customer Success Leader in helping clients in their transformation agenda embracing the power of Customer Experience, AI & Data, and Digital Engineering. He hosts several industry forums and enjoys connecting leaders and sharing insights with members. He can be reached at Badhrinath.Krishnamoorthy@Cognizant.com.

The Cognizant Product and Engineering Officer Forum: The exchange is comprised of Chief Product & Engineering leaders from leading Communications, Media, and Technology companies. The group gets together on a quarterly basis to share best practices, exchange insights, learn from one another, and navigate these unprecedented times. Members decide the exchange agendas; interactions focus on the questions and interests of the members.

Profitable Ideas Exchange (PIE): PIE brings together communities of Fortune 500 executives from across the globe to connect, collaborate and learn from one another. PIE stands out for its ability to bring diverse voices to the table and facilitate ongoing high-value conversations. Two key components of PIE's practice are pre-interviewing participants to build relevant agendas, and a time-efficient format (virtual as well as inperson) to allow for executives to convene despite time and geographic constraints.

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