Digital Transformation – Empowering the Enterprise

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ABSTRACT

This article summarizes a fireside conversation featuring **Databricks** CEO and Co-Founder, Ali Ghodsi, and **Amplitude** CEO and Co-Founder, Spenser Skates, on the topic "Digital Transformation - Empowering the Enterprise" which took place at the GIC Partnership Forum - Digital Dialogue 2021. Hosted by Ethel Chen, Senior Vice President in GIC's Tech Investment Group, the speakers shared their insights on how data, Artificial Intelligence (AI) and digital products are shaping the future of business.

Tell us more about Databricks

ALI: We launched Databricks' in 2013 with a mission to democratize data and AI. **We want to help every enterprise on the planet unlock incredible value by leveraging data and AI in the same way many of the most innovative tech companies have.** We take the problems enterprises have around data and AI, open-source them and provide a Software as a Service (SaaS) platform in the cloud where they can use these tools.

According to Gartner, AI business value will be a nearly $4 trillion market, but today, only 1% of the companies are really leveraging it strategically to disrupt their industry. This is because historically organizations are siloed, with IT departments leveraging more reliable and secure technologies like data warehouses that have no AI or machine learning capabilities, and data scientists using tools like Python which don't work with massive amounts of data. We believe both must be combined to unlock the true of these predictive models for business and that is exactly where Databricks comes in.

Through our unique platform, leveraging both data and AI, retailers are able to accurately forecast down to every skew in stores around the world. In pharma, companies are finding genomes responsible for chronic diseases and developing the right medicines for that. In banking, companies are using this technology to reduce fraud. We believe this is just the beginning.

Tell us more about Amplitude

SPENSER: Amplitude helps businesses answer this strategic question "How do our digital products drive our business". The inspiration behind Amplitude started when my co-founder and I were working on our first startup, Sonalight, and we discovered founders and product people were having a massive problem figuring out how customers were using digital products like apps and their website. We wanted to give anyone building a

digital product and business access to this data, not just data scientists and analysts, so they could clearly see where their product was working for customers and where it was not. 98% of people who download an app or sign up on a website never come back to it. We want to change that.

As Ali mentioned, companies are spending trillions of dollars on digital transformation. The crazy thing is, most companies cannot tell you how that investment actually drives the business. Companies are guessing on what they should build next, and very few companies are truly connected to what their customers are actually doing. In order to fill this massive black hole, Amplitude introduced the industry's first ever Digital Optimization System which helps businesses understand customer behavior in digital products, predict which features and actions lead to business outcomes, and adapt each experience in real time to maximize its impact.

How do you define AI?

ALI: It's as simple as using massive data to do predictions. It's exciting because companies can use those predictions to directly affect business strategy and build smarter, better products and services for their customers. For example, in ridesharing, companies are leveraging data and AI to disrupt the entire industry. AI allows them to understand things like the estimated time of arrival and price of a ride, and ultimately increase the customers for each car. We want to help every enterprise use data and AI do predictions for their business, and it will be different for each company.

AI can be transformative, but companies struggle to use it effectively – what issues do you see and how can companies solve them?

ALI: The hardest part of AI is the data piece. There's so much data in every organization; it's coming out of products and services that you may have had for many years, but this data is not coming in mathematical form where you can use

machine learning. So, not only is there a ton of data processing involved, but you also need to find ways to keep it confidential, create access and combine it for analysis. It's tough, and that's why we created a platform to do both.

The second challenge is making sure your organization has people with the right skillsets. That's why we are aiming to make our platform accessible to as many people in the organization as possible, from business analysts and engineers to data scientists, everyone has their own use case.

What are some challenges and blind spots businesses face as they embark on digital transformation?

SPENSER: One of the biggest challenges is getting the data to work with your existing systems to drive useful insights. A lot of companies still have a more traditional product development mindset, with a top-down vision and are not particularly concerned about measuring the success of what is going on with their products. **For us, it's really focusing on companies who are ready to make an investment in data as a competitive advantage.**

For these companies, they want to understand the customer journey end to end so that they can create the best experience possible. We're also seeing this transition in how companies build products, from just coming up with a brilliant idea and insight and trying to find that magic formula, to taking a more quantitative approach, involving very technical thinking about what and how to build it, and then using data to support those hypotheses.

Marketing has already been through this transition. Today, as a Chief Marketing Officer, you must understand the return on investment for your advertising campaigns – you're expected to know where your dollars go. The best product teams in the world, including the likes of Facebook and Netflix, are already doing this with data and the rest of the world will soon follow.

ALI: Key challenges facing most companies include legacy data systems, regulations that limit what they could do with the data, data silos, and getting their various data warehouses to speak to each other. Unlike the larger tech firms, they don't have large dedicated teams nor the relevant skillsets to work on this. They also have massive amounts of data stored typically in data lakes, that they have to move into different systems in order to use it. The Databricks platform combines the best qualities of data warehouses, which allow you to ask questions about the past, with data lakes, which allow you to ask questions about the future, to give us a "lakehouse", which allows data, analytics, AI and <u>BI</u> (Business Intelligence[1]) to be on one platform. We're simplifying the process in making the companies' data usable for AI, machine learning, BI and more through our "lakehouse" architecture. It's a technological breakthrough, and through this simplicity and efficiency, enterprises can increase their productivity.

What are the keys to a successful digital transformation?

ALI: Successful organizations make sure their business is future proof and preserve optionality. They do it in three ways: first, they adopt a **multi-cloud approach** at the earliest stages. Cloud vendors have different strengths and weaknesses; some have specialized hardware for machine learning or better software. It's also good for regulatory purposes, as certain regions have different requirements.

Second, **leverage open source**. This allows you to not get locked into one solution that could be great today, but outdated in 10 years.

Third, **build data and AI into the foundation of your business** – don't leave out any aspects, AI should span your entire data strategy from the get go.

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[1] Business intelligence (BI) refers to the procedural and technical infrastructure that collects, stores, and analyzes the data produced by a company's activities. BI technologies provide historical, current, and predictive views of business operations. By handling large amounts of structured and sometimes unstructured data, they can inform decision making and help identify and create new strategic business opportunities.

What future trends are you seeing in digital analytics?

SPENSER: We are still in the really early days of digital analytics. Most teams are still wrapping their head around using data to drive the building of their product. However, it's exciting to see more sophistication around adopting digital analytics and embracing this technology to drive business.

One interesting trend is using the data to feed that back into the product experience in the form of recommendations for the customer. For example, we just launched a product that allows you to create Netflix-style recommendations for your customers based on past actions, shows you've watched or what you bought. When companies do it right, we see uplifts of 50% to 100% in terms of conversion rates - this is massive for businesses. But this means you have to get that data in, you have to get it in real time, you have to create models to understand what it is that someone is likely to engage with. We're seeing a lot more enterprise companies get interested in making the investments and wanting these capabilities to create a product that's adaptive to their end user.

What trends are you seeing in digital transformation outside of the US?

ALI: It was eye opening for us to see that companies in Asia are adopting digital transformation much faster than those in Europe. This is due partly to less data privacy regulations. In the US the sentiment is different. There are more questions around the negative consequences of AI; will this technology replace our jobs and should we be afraid? Whereas, in big chunks of Asia, it's the opposite. For example, in Japan, it is top of mind that they are not able to deal with the aging issue, unless they can automate these things with AI. **In many parts of Asia, the mindset is that we need to have these tools today or we can't deal with the challenges we'll face in 10 years.**

What is the impact of AI & machine learning over the next 10 – 20 years in terms of behavior, choice and privacy?

ALI: We're in the very beginning, but it is inevitable that **every single enterprise will begin leveraging data and AI in every aspect of the products and services they provide. This innovation will keep happening and you can expect it to change every job and everything that we do on the planet. It's really important that people start honing in on those skills and learn to leverage this because it's going to become ubiquitous.**

I believe some jobs will get automated, so people will need to learn new skills and adapt to this new world. I don't think people will be unemployed, because at its fundamental level, AI and data is making the world a better place. What are the fundamental things humanity needs? We need food, we need shelter, we need healthcare, education and AI and data can improve all of those**.**

Which sectors have been slower to adopt digital, and have yet to be disrupted?

ALI: Every single vertical is using data and AI with Databricks, today. In the beginning, I struggled to understand where we should focus to create impact, but now I realize that the same four or five AI algorithms can be used across every vertical to solve lots of different problems.

Interestingly, the financial sector has been slower to move into the cloud despite being so data driven, because of the heavy regulation in the industry. However, I've seen huge progress in the last two years, with FinTech companies shifting from a "that's never going to happen" mentality to starting to get on the cloud, working with regulators to make it possible, and looking at ways to make it happen faster.

On the flip side, some traditional industrial companies have been very fast to embrace digital. For example, John Deere uses sensors on their tractors and uses that data and AI to

improve crop efficiency and energy consumption. Overall, fastest growing and most successful users have been the healthcare and pharma verticals. For these industries it's often about finding a needle in the haystack with massive amounts of data, so it's been an important part of these industries for a long time.

What are some problems retailers might face that could be solved using data?

SPENSER: Customer behavior prediction is the big one. If you can customize and personalize your product on a per user basis, that becomes so much more powerful and in some cases conversion rates double or triple. It's also a good experience for the consumer, because no one wants to see products they're not interested in buying.

For example, in quick-service restaurants, do they know what their most popular items are in store, what is it that is most likely to lead someone to buy their product, where or how do they get stuck in the order flow? These are all questions that that we work with to help them improve their businesses. Similarly, as more retail companies go online, do they have an interactive digital experience that can track, better understand and figure out what they need to do to set their product up for success.

What are the attributes you look for in an investor?

ALI: For Databricks, because we want long-term partners, GIC's many-decades perspective make the firm an attractive partner. We also appreciate being **able to leverage GIC's network to meet companies and partners across Asia**.

SPENSER: As a CEO, I think a lot about building relationships that set Amplitude up for really long-term success. **We really value the ability of an investor like GIC to stick with us throughout our journey, even as we move to the growth stage and eventually to the public markets.**

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