The Cloud Chronicles: Unbiased straight talk from real cloud customers.

There is no shortage of opinion out there regarding the value of one cloud provider over another. We want to provide our 1,500+ cloud customers with a platform to share their story, unfiltered and unabridged, so that others may benefit from what they have learned along the way.

Part Three: Delivering brand insights to on-line retailers through machine learning.

An interview with Norman Shi, Chief Technology Officer at gradient.io

Interviewer
Scott Thomson
Director, Business Development
Public Cloud
Softchoice

Guest
Norman Shi
Chief Technology Officer
gradient.io

"There are many benefits of using Google Cloud, for example, BigQuery, which is Google's fully managed, petabyte-scale, low-cost analytics data warehouse."

We're lucky to have over 1,500 cloud customers in our care. One of the things we've realized, especially as Partners of AWS, Azure, and Google Cloud, is that each customer is unique and can benefit from the different cloud vendors that fit their business needs. That's why we created the Cloud Chronicles, to capture our customers' unique stories and the technology decisions that they've made along the way. Ideally, these Cloud Chronicles will inform others of the path that you've taken, the problems you faced, and how you have overcome them.

Norman, can you begin by sharing a bit about yourself?

Sure thing. I am the Chief Technology Officer for Gradient Technologies. I am responsible for overseeing all of our engineering programs. I spent much of my career working in large technology companies such as Yahoo in its early days (2000) and at Google where I had the opportunity to build a number of products from conception to launch.

I have always had a passion for development and a desire to stay as close the code as I can. So, for the past few years I have been involved with a number of successful startups namely invino.com (acquired by private equity GCW LLC) and ebates. com (acquired by Rakuten). I joined Bobby (Gradient founder Bobby Figueroa) here at Gradient because I believe we have a chance to redefine the brand insights in e-commerce with machine learning.

Can you tell me about your company through the lens of your customers? What problem or opportunity did you recognize existed in the market? What technology decisions did you make along the way to help grow Gradient to be the successful company it is today?

I will first share a little bit about our history at Gradient and how we started. Our founder, Bobby Figueroa, worked at Amazon and was the head of Global Operations for Amazon Advertising, so he is a veteran in the advertising space. After he left Amazon, he started working with Pioneer Square Labs which is an incubator for startups that helped raised $3.5M to launch Gradient to help brands optimize their presence on Amazon with their algorithms.

"If you were to run a large business intelligence query on Amazon Redshift, it would take up to four minutes, but if you run it on Google BigQuery, it will always come back in 10 seconds."

Years ago, brand optimization was purely an offline experience with a simple way to optimize brand awareness. For example, when you go into the supermarket and enter an aisle for detergent, you will see the most popular brands right at your eye level, easy to reach, and many bottles wide. If you don't see it, these companies know you are not going to put it in your shopping cart. Companies who own the majority of these brands pay upwards of $25 billion a year to have the privilege to occupy eye level shelves. However, offline retail is not like digital advertising, the return on investment is not clearly measured and it's hard to quantify the impact of being on that shelf versus the one below or the one above.

With e-commerce and online retail stores like Amazon, everything is measurable. The question Gradient answers is how strong your brand is on Amazon.com, and how does it compare to other brands. As a brand manager, you may know your sales because it's your product, but how are your competitors doing? They ask the same questions: How do I increase my sales and squeeze out the competition? Gradient's immediate goal is to answer these questions by using algorithms to score brands, comparing them with competitors, and seeing where there could be an improvement. These decisions are crucial to helping brands forecast sales and help with marketing budgets.

The addressable market size of Amazon has got to be astronomical, but there aren't a lot of solutions out there providing visibility on performance. Can you shed some light on how you give the customer a product score and what that means for the customer?

We start by building a dashboard of all the brands in our customer's category and comparing them to competitors. This dashboard is a SaaS product that our customers can purchase, where they can slice and dice the data to understand different metrics. For example, if the customer wanted to decrease their budget in advertising, we can show our customers where that would rank their product. There are two forms of advertising, organic and paid. Organic is word of mouth or ratings. Amazon is in charge of the organic orders of the search results, so there aren't a lot of opportunities to influence your brand organically. And more than likely, Amazon uses their rankings to their advantage, especially with their Amazon Basics product line.

We've recognized that our customers care about how Amazon Basics is competing against them because in that case, you are no longer competing with your competitors, you're also competing with the host of the selling platform. We offer a free version today that makes a comparison with a single product to show the significant benefits of Gradient and give you a real-time score for that product. Nowadays, with machine learning, we can process millions of data points simultaneously, which we use to calculate a customer's ranking or score. We then compare that ranking to Amazon and let our customers know where their brand is and how to improve.

That's a fantastic business model, providing valuable insights to your customers that clearly contributed to your current success. I am curious to know what key technology decisions you've made and what differentiated one cloud vendor from the other based on your individual needs as a company focusing on the retail industry?

Our technology decisions had a lot to do with my background, as I worked at Google directly on their Shopping Search. I'm also very familiar with AWS and view all these public cloud vendors very similarly. There are subtle differences, but they are mostly the same. However, as we are in the e-commerce, Amazon is a dominant player. Other e-commerce companies like Walmart, Target and others do not wish to host their business data on AWS. So we build our tech stack on Google Cloud.

Certainly, in the retail space, if your customers compete with Amazon, then it would make sense that you service your customers from a more retail-friendly platform. Another common theme when it comes to start-ups like Gradient is that you were born in the cloud without legacy infrastructure. Did that position provide a unique opportunity to choose a public cloud vendor that best suits your business needs without having to take into concern any existing on-premises applications?

Correct. And with my own experience, being familiar with both AWS and Google Cloud while also working with huge amounts of data and small amounts of data, choosing a public cloud vendor was simplified. When you only have a few machines at the beginning, with a couple of databases on MySQL or PostgreSQL, they work well on all of the public cloud platforms. But eventually, your application requirements will get to a stage where you require a higher level of infrastructure that offers greater scale, elasticity and processing speed. And once you pick one, you have to stick with it because once you start using higher-level services with any cloud vendors, migrating to a different vendor comes with a substantial cost of change. It's not impossible, but it will be costly and resource heavy.

There are many benefits of using Google Cloud, for example, BigQuery and BigTable which is Google's fully managed, petabyte-scale, analytics data warehouse. Google also open sourced many of their internal services and projects most notably Kubernetes and integrated them into the GCP, making them not only available but accessible to the average user through an x-as-a-service design.

When you think of Google's scale, they're probably the largest data collection company in the world. They have learned to process massive amounts of data in seconds and they have built services like BigQuery and Cloud BigTable to consumerize truly hyperscale data and analytics services for anyone to use. These services are game changers for any organizations who want to process terabytes and petabytes of data. As an example: If you were to run a large business intelligence query on Amazon Redshift, it would take up to four minutes. But if you run it on Google BigQuery, it will always come back in 10 seconds, regardless of how much data you have. That's a massive benefit and difference for Google Cloud.

That provides excellent insight into some of the struggles that startups have to endure, and I'm sure many can relate. As you know, one of the advantages of working with a Managed Service Provider (MSP), like Softchoice is our Cost Optimization, even as basic as moving your cloud spend off of credit cards to a more manageable billing invoice. My last question to you would be, how else can we add value as an MSP, in our role with other startups starting their journey in the cloud?

From a small company point of view, resources are a constraint, we don't have the same level of experience or skill set that Softchoice can offer. Even with the vast amount of Google services available, we needed to find an MSP that knows our architecture, who can continuously review and provide insight. And as a Google Cloud service provider, you probably have seen many companies like us and can give direction on problems similar to what our business is facing. So, we value your insight based on your partnerships with multiple cloud vendors and the work with companies like ourselves who started in the cloud and are growing at an exponential rate. But most importantly, it is the monthly billing that we can utilize with Softchoice. As a startup, we need to move and build quickly, but don't always have the same credit available to us like more mature companies. Softchoice provides us the opportunity to build rapidly and manage our cloud spent more realistically.