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What's your favorite flavor of ice cream? What about your best friend's favorite? Imagine asking these two questions to hundreds, thousands, millions of people.

Some will have similar preferences. Certain flavors will be popular. Others, not so much.

For data scientist Thia Kai Xin, he poses similar questions to millions each day. Except on Alibaba-backed ecommerce platform, [Lazada](#).

"My job is to write code that will teach big, powerful computers to learn the patterns of behaviors among people," says Kai Xin. "The computers will then be able to calculate the optimal price to sell the ice creams, find groups of people with similar preferences, recommend them new flavors that they might like, and make many more predictions that will take people years to work out on their own."



*Thia Kai Xin. Photo credit: Thia Kai Xin.*

Better known as the co-founder of [DataScience SG](#), Kai Xin started his career dealing with hardware servers in SAS and Dell EMC, before moving on to explore how data could make a difference for patients at Singapore's Khoo Teck Puat Hospital.

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Among other things, he spent close to two years collecting data and measuring the risk profiles of patients to help nurses prioritize their most at-risk patients.

“I really liked the impact I made at Khoo Teck Puat,” says Kai Xin, “But to really challenge myself, I wanted to go into something of a larger scale and with more diversity. And ecommerce provided that opportunity.”

Kai Xin was one of the first few hires on the data team in Lazada, and today specializes in behavioral analytics, especially in relation to large recommendation systems that ecommerce sites like Lazada use.

He is also working concurrently on a Master of Science in computer science from Georgia Institute of Technology.

## **How it all started**

Kai Xin never planned to become a data scientist.

“I entered the field thanks to guidance from Professor Kam at Singapore Management University (SMU),” he says. “He showed me how fun data analytics can be and how it can provide useful insights. I felt comfortable with the subject, and was motivated to learn more.”

Kai Xin worked on his first data project as an undergraduate with [Soyato](#), a soy ice cream startup co-founded by Alan, an SMU senior of his. “It was a simple logistics optimisation model done in Microsoft Excel, but we learned a lot from the project and from Alan, who helped us understand the unique challenges of the ice cream business. It was the first time I worked with a real business client on a data project,” he says.

Kai Xin graduated from SMU, majoring in business analytics and intelligence.

The self-professed geek now divides his free time between reading/listening to books (anything from *Zero to One* by Peter Thiel to *Now: The Physics of Time* by Richard A. Muller to the Harry Potter series by J.K. Rowling), reading multiple research papers a week on various data science topics of interest (like deep learning, natural language processing, and recommendation systems), and “messing around with projects on GitHub.”

Above and beyond that, he organizes [DataScience SG meetups](#) for the community of data scientists in Singapore.

At DataScience SG, the founding team’s mission is “to level up data science together.”

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The group started when **John Berns**, co-founder of BigData SG and currently the head of data science in Lazada, wanted help to establish a new meetup group to cater to the needs of the small but growing group of data science enthusiasts in Singapore.

With his guidance and the help of co-founder **Koo Ping Shung**, DataScience SG held their first meetup in January 2014.

DataScience SG is now a community of over 4,000 data scientists, organizing monthly meetups with industry leaders, mentorships, and workshops. To date, they have hosted over 40 meetups, with speakers from organisations like Flickr, Microsoft, LinkedIn and startups like Honestbee, Grab, and Garuda Robotics.

Kai Xin hopes for DataScience SG to be a place for people to meet, exchange ideas, and build their data science muscles. “Singapore’s data community is still young,” he says. “And we have much to learn from our counterparts all over the world. We [as organizers] will work with partners to expose our members to a greater depth and breadth of topics.”

This too falls in Kai Xin’s ambition to put Singapore on the world map for data science.

## Leveling up data science in Southeast Asia



*Kai Xin speaking at the Strata + Hadoop Big Data Conference Singapore. Photo credit: Thia Kai Xin*

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Kai Xin speaking at the [Strata + Hadoop Big Data Conference Singapore](#). Photo credit: Thia Kai Xin

Kai Xin is on a personal mission to contribute to the knowledge of artificial intelligence, especially in Southeast Asia.

“China, the US, and Europe are very strong in terms of their data science knowledge and research,” he says. “The chief architect of Apache Spark is Chinese, extensive studies on neural networks are done by Americans. Southeast Asia has nothing much to show; we are more so consumers of what these countries have developed.

Due to the lack of opportunities here, many of my friends who are data scientists in the region are leaving to work overseas. One of them once told me, ‘To be the best, you have to be among the best.’ Which is not here. But from a developer’s perspective, it’s also very true. There’s only so much you can learn on your own. A lot of times, I pick up terms from people way smarter than me, many of them from overseas.”

Kai Xin hopes that by building a community that is deeply curious and passionate about data science, things will change for the better. “I hope that, one day, there will be something that we can be proud of to call our own. Even if we can’t see that through in our generation that we will be able to train more data scientists in the region, so that they may forge their own paths.”

But with companies setting up their data science and analytics hubs in Singapore, things are looking up. “It is great that forward looking startups like nuTonomy chose to set up their research lab for self driving vehicles in Singapore,” he says.

## Inspiration

Kai Xin lists three people in the field he looks up to.

“Andrew Ng for one, the co-founder of Coursera, which revolutionized online learning,” he says. “[His machine learning course](#) is a great start for folks who want to understand the subject beyond the surface.”

“Geoffrey Hinton is the godfather of neural networks theory,” he continued, “his work laid the foundation for deep learning, a technique that [the AlphaGo team used to beat Lee Sedol in ‘Go’](#). It took 30 years for technology to finally catch up to Geoffrey’s vision to develop neural networks powerful enough to have a limited form of ‘intuition’, by which time most of his sensible colleagues had given up and moved on to ‘more promising’ options.”

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Kai Xin also harbors a deep respect for Sebastian Thrun, the godfather of self-driving cars. “Instead of spending his entire life in comfort at Google, he founded Udacity to educate the next generation of IT engineers and open source self-driving car technologies,” he says.

### **Advice to future data scientists**

“Join communities like DataScience SG,” he offers. “You will need the network for jobs and internships, as well as friends to bounce ideas and share the misery of studying gradient descent at 3am.”

“Most data companies are looking for T-shaped data scientists – people with a general breadth of skills including programming, familiarity with tools, and business acumen, combined with depth/specialty knowledge of a particular field such as NLP, graph processing, stream analytics, or recommenders,” he says. To stay competitive, then, candidates should develop their skills accordingly.

Finally, Kai Xin urges aspiring data scientists to be consistently persistent. “Data science is difficult,” he says. “There is a lot of learning, re-learning, un-learning. You need to persevere through boring projects that are essential and interesting projects that are impossible.”

To find out if this is the career for you, Kai Xin recommends starting with the [66 mini hell formula](#).

He also leaves a [detailed list of reading resources](#) compiled over his years in the field.

As we wrapped up the interview with Kai Xin for the day, I asked what his greatest takeaway was after all these years in data science.

“That people are predictably irrational,” he laughs. “But however irrational we are, we always try to rationalize that irrationality. Yeah, we’re funny that way.”