

A Rebel Data Scientist



Written by

Data Science Alliance

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Slackers can be achievers. Rebels can have causes. And there is no definitive template to becoming a data scientist. Case in point: our very own Data Science Alliance Board Member, Dr. Bradley Voytek.

Don't let the uncertainty at the start of your data science journey define your expectations for the future — opportunity can appear at any time and completely change your trajectory. In the meantime, as you search for your own spark, let Bradley's data science itinerary show you how life's detours can lead to tremendous personal revelations. Be curious, ask the right questions, "take to the streets." Inspiration is out there!

Originally published in 2020, a story that is both extraordinary and relatable, we proudly present...

ICYMI: A Rebel Data Scientist by The Data Science Alliance

Dr. Bradley Voytek did not set out to become a renegade data scientist or the brains involved in Uber's expansion from a small San Francisco startup to a global phenomenon. Instead, he started as a first generation college student from San Diego with big plans to study physics at the University of Southern California (USC).

But there was a small problem: Bradley was a bit of a slacker, and physics wasn't motivating him to become the serious college student he'd set out to be. He spent his first few years at USC struggling through physics classes and nearly flunked out of college.

This was partly because Bradley watched the painful decline of his grandfather's health due to Parkinson's Disease. His grandfather — with whom he'd lived for years before college — quickly deteriorated from a successful engineer to struggling with basic everyday tasks. Soon, Bradley became less and less interested in physics as he realized that the brain, the data center of the human, was where the real magic happens. With this new interest in the mind, partly due to his observations of his grandfather's health, Bradley wanted to learn about the brain and changed his major to psychology.

It was in neuropsychology classes that he truly found his niche. Bradley was also spending quite a bit of time with his friends in the computer science program and enrolled in a few programming classes. This major became increasingly popular, due in large part to the dot-com bubble of the late 90s. As he made his way through programming, computer science, and neuropsychology, Bradley's mind began thinking differently and his eyes opened to the magic and connection between data and neuroscience.

We start to see a glimpse of the citizen data scientist that Bradley would become when he worked as a young research lab technician. He was tasked with taking years' worth of experimental data from hundreds of text files and transferring them to an Excel spreadsheet so the scientists could analyze the data. The scientists expected this would take Bradley weeks to complete.

But Bradley, with his knowledge of basic computer programming, wrote a program to do it and the Herculean task was finished in a day. The scientists were shocked, and it was then that Bradley thought, "Hey, this computer programming stuff can be really useful in science." He soon became the de facto tech guy for the neuroscience lab. As a result, Bradley went from nearly flunking out of USC to earning a Ph.D. in neuroscience from UC Berkeley in 2010.

Once again, however, Bradley found himself in that familiar terrain of not quite knowing where to go next. One evening, he was lamenting with friends about what to do with his doctorate degree and life. That's when a friend encouraged him to join him at a small startup in San Francisco. That startup, his friend said, needed someone to do data analysis. Bradley took the leap and accepted the offer. And that small startup? It was Uber.

At the time, Uber was only operating in the Bay Area out of a coworking space. Bradley was tasked to grow the rideshare company using data. Today, this may have seemed like a realistic challenge. But this was Uber in its infancy. The company data that Bradley would need — it didn't exist! How would Bradley determine a growth strategy?

Bradley asked the Uber team the key questions that he continues to ask today: What is the problem we're solving, and how can data get us closer to a solution? Uber, in response, wanted to know which cities it could expand into to be successful.

While there may not have been company data available, Bradley took to the streets and found any and all relevant data to solve this problem. His team looked at surveys about cab companies in different cities. If he found a city with an unpopular transportation ecosystem, that city was ripe for an opportunity like Uber. His team also studied the maps, public transportation locations, and population density in the largest U.S. cities. Bradley used all this publicly available data to come up with a data-driven solution for Uber. The rest is history!

After leaving the startup culture behind, Bradley made his way back to his hometown to join UC San Diego as a Professor. He started a neuroscience/data science lab, and also created a new class to get undergraduates excited about using computation and data analysis to solve problems related to the human condition. In his first year teaching the course, "Introduction to Data Science" had a total of 24 students. The second class had 80 students. Soon it had 150 students, and then 500. Not long after that, Bradley was helping to create the new data science major, which became one of the most popular programs of study at the university. The 24 undergraduates that were in the first class went on to start the UC San Diego Data Science Society (DS3), which (as of 2020) had over 3,500 members on Facebook.

Bradley's journey to "rebel data scientist" was not an easy one, nor was it the path he originally set out to take. But Bradley followed his mind, his heart, and his curiosity. His love for data and neuroscience, along with his experience in computer programming, all came together to create something amazing. In 2020, Bradley joined the Data Science Alliance (DSA) as a board member to continue fostering the mission of using data to help people think through problems. At DSA, he is guided by those same central questions that have centered him throughout his career: What is the problem we're solving, and how can data get us closer to a solution?

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