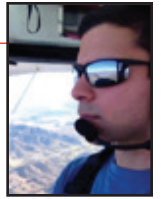




Profile: Reza Zadeh

Technical Advisor at Databricks, Berkeley, California
Consulting Professor, Stanford University, Stanford, California



BS, Mathematics, Louisiana State University; PhD and Masters, Computational and Applied Mathematics (emphasis in Computational Science), Rice University

EARLY INFLUENCES

What sparked your interest in mathematics? When did you know that you would use math as a path to your career?

When I was a sophomore interning at the Google machine translation project, I thought their use of statistics to learn how to translate between two languages was phenomenal.

If some other field of study led you to mathematics, please tell us about it.

Uses of mathematics in computer science led me to mathematics.

Was there a pivotal moment/experience/ influential person that led you in this direction? Any memorable courses or experiences that made a difference in directing you to your career? Any obstacles you needed to overcome?

My linear algebra and combinatorics professor at Waterloo was especially influential.

CAREER/CAREER PATH

Describe your current position and briefly, the path you took to get there.

I build machine learning tools in Apache Spark, which is used by many universities and companies. I also teach and advise students at Stanford University.

What is a typical day at work for you? Please list your job responsibilities. What are you responsible for?

I am either at Databricks in Berkeley where we often talk about intricacies of scaling up mathematical algorithms, or on campus at Stanford where I will be teaching classes and advising students in their research.

What do you like best and least about your profession? What is the stress level associated with this type of position?

I like the variety of problems that arise—from many different and diverse applications. I like least that sometimes you have to think about a problem for years and you still make no progress, but you must continue.

How many hours per day or week do you typically work? Do you have flexibility that allows a good life/work balance?

I work around 100 hours/week, but because I have flexibility I can fit in fun activities almost every day.

CAREER EXPECTATIONS FOR YOUR FIELD/POSITION

How/why are applied mathematics and/or computational science important to your industry? How are they used?

We provide tools that others use to build their models. To build these tools one needs an in-depth understanding of computational mathematics.

Where do you see the future of math in industry or in your particular career?

Math will forever be the driving force behind machine learning; they are intimately linked.

Have you worked other jobs, or held other job titles as an applied mathematician or computational scientist?

I have previously been a computer scientist and software engineer, which is different from computational scientist in that there is more coding and less mathematical modeling

ADVICE

If you could advise someone currently pursuing the same degree or profession, what would you say?

Make sure you understand other people's motivations, and help them achieve their goals so that they will be willing to help you in the future.

Any specific supplementary skills or training you can name that a person pursuing this profession should acquire?

Make sure you can program expertly in low-level as well as high-level languages, i.e., learn both C++ and Python, not just one or the other.

Where can people find out more about your profession?

lcme.stanford.edu

