Viraj Navkal

Full-stack Data Scientist

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Profile

- As the first data scientist at Upstart, I oversaw development of the underwriting model. The model has consistently outperformed competitors, attracted $500M in investments, and enabled the company to grow from 14 to nearly 100 employees.
- As a mathematician, I strive to approach problems with as much rigor and conceptual clarity as possible.

Experience

Upstart / Data Scientist

October 2013 - present

- Wrote a numerically stable optimization function to train our custom risk model, a modified version of L1-regularized logistic regression
- Managed the interface between the Django pricing application and the Ruby on Rails web application, using RabbitMQ to allow prioritization of requests and ensure connection reliability
- Wrote an extensible, asynchronous utility to extract data from the web application's PostgreSQL databases and transform it into a single table on which statistical models could be trained
- Built financial models to estimate the distributions of future portfolio cashflows
- Worked closely with other teams – operations, compliance, engineering, growth – to ensure their needs were met
- Received excellent performance reviews, available upon request

Education

University of California, Los Angeles / Ph.D., Mathematics

2007 - 2013

- Thesis topic: Commutative algebra (a generalization of linear algebra)
- Advisor: Christian Haesemeyer

University of Pennsylvania / B.A., Mathematics and Physics

2003 - 2007

- GPA: 3.93
- Academic honors: Phi Beta Kappa, Benjamin Franklin Scholars

Skills

- Fluent with Python, SciPy, Ruby on Rails, Linux, git
- Proficient with PostgreSQL, Java, emacs/elisp, Heroku, AWS, Scala, Spark, Django, distributed task management (celery/Sidekiq)