

NEEL SOMANI

EDUCATION

University of California, Berkeley

B.A. Computer Science, B.A. Mathematics, B.S. Business Administration

Berkeley, CA

Aug. 2015 – May 2019

- **Cumulative GPA: 3.92 / 4.0; Major GPA: 4.0 / 4.0; EECS Honors Program, Phi Beta Kappa**
- Relevant Coursework: Machine Learning, Operating Systems, Algorithms, Artificial Intelligence, Computer Architecture, Discrete Math & Probability, Probability & Statistics in Data Science, Linear Algebra & Differential Equations, Complex Analysis
- ACT: 36 / 36; GRE: 340 / 340

PROFESSIONAL EXPERIENCE

Two Sigma Investments

Software Engineering Intern

New York, NY

May – July 2019

- Implemented statistical functions into a query language for financial factors for the fundamental analysis modeling team
- Built a Python library to easily estimate the expected return and volatility of various economic and financial factors over time

Oasis Labs

Software Engineering Intern

San Francisco, CA

Jan. – May 2019

- Accel-backed Series A startup building the first privacy-preserving cloud computing platform on a scalable blockchain
- Built a multithreaded service to reliably watch transactions on the blockchain and log relevant statistics in Go
- Worked on a product to facilitate provably private ML by third parties by building on my previous research project Duet

Bain & Company

Associate Consultant Intern

Los Angeles, CA

Jun. – Aug. 2018

- Led the development of a visualization dashboard to expose the cost drivers of drug trials to the CEO of a large biotech company
- Developed the logistics strategy to implement more accurate budgeting practices in over 500 cost centers globally

Google

Software Engineering Intern

Seattle, WA

May – Aug. 2017

- Full stack development on the quality analytics team for real-time communications apps, which includes Hangouts, Meet, etc.
- Validated 100+ TBs of raw logs with distributed computing, using protocol buffers and a Spanner database
- Built a web app (Java server) to visualize results, for a team of ten developers to identify invalid raw logs before analysis

RESEARCH EXPERIENCE

UC Berkeley RISELab

Undergraduate Researcher

Berkeley, CA

Jun. 2018 – Jan. 2019

- Worked on Cirrus, a framework that allows users to easily run machine learning algorithms in scalable, serverless environment
- Serialized models efficiently with FlatBuffers in C++, and wrote a collaborative filtering task that ran on AWS Lambda
- Built a performant serverless preprocessing library by defining atomic Lua primitives in Redis and parallelizing database operations

Berkeley Institute for Data Science

Software Engineer

Berkeley, CA

Aug. 2016 – Jun. 2018

- Refactored the open-source [Brainspell](#) project for better scalability, reducing load times by 53% and page sizes by 40% ([abstract](#))
- Migrated to the Tornado framework in Python with PostgreSQL, designed a JSON API, and added 3D graphics using Three.js

University of California, Berkeley

Undergraduate Researcher

Berkeley, CA

Feb. 2017 – Jun. 2018

- Worked on Duet, a framework that allows developers to statically and automatically enforce (differential) privacy in Scala ([paper](#))
- Built privacy-preserving services using Intel SGX, Spark, and machine learning algorithms
- Implemented private recommender systems (e.g., alternating least squares) to handle gigabytes of data, using NumPy and SciPy

SKILLS & INTERESTS

- **Languages/Technologies:** Proficient in Python, Java, C; familiar with Javascript, SQL, Spark, NumPy; previously used C++, Scala. Experienced with Git, Amazon Web Services, Unix/Linux, Flask/Tornado, LAMP stacks, Intel SGX, AWS Lambda.
- **Activities:** Blueprint (nonprofit software engineering), Kairos Society, Upsilon Pi Epsilon (CS Honor Society), SOAR for Youth tutor (20+ students K-12). Designed curriculum and lectured for three semesters of UGBA 198: Machine Learning for Business Decisions.
- **Interests:** Philosophy (epistemology and philosophy of science), bodybuilding, jazz drumming, traveling, running

HONORS & AWARDS

- **The Leadership Award** – Cal scholarship awarded to 5% of 10,000+ applicants for innovative leadership *Aug. 2018*
- **Accel Scholar** – Selected by the venture capital firm Accel for achievement in tech and entrepreneurship *Oct. 2017*
- **CCAR Scholar** – Awarded \$4000 scholarship from the Contra Costa Association of Realtors for achievement in business *Jun. 2017*