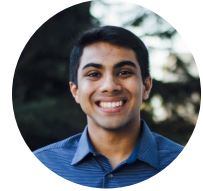


Nikhil SHARMA

Researcher, Developer, and Educator

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PROFESSIONAL EXPERIENCE

- | | |
|-------------------------|--|
| Present
October 2018 | Software Engineer Oasis Labs, BERKELEY, CA <ul style="list-style-type: none">➢ Building a privacy-first cloud computing platform on blockchain. <div>Smart Contracts Rust Golang Javascript Vue.js Docker Kubernetes</div> |
| August 2018
May 2018 | Software Engineering Intern Google, MOUNTAIN VIEW, CA <ul style="list-style-type: none">➢ Worked on the Ads: Infrastructure team➢ Constructed a statistical analysis tool for visualizing patterns in sampled ad requests➢ Derived and implemented scalable approximation algorithms for estimating summary statistics <div>Bootstrap jQuery jslayout C++ Google Charts</div> |
| August 2017
May 2017 | Software Development Intern Amazon Lab 126, SUNNYVALE, CA <ul style="list-style-type: none">➢ Worked on the Alexa Engine team➢ Designed and implemented an extensible API integrating Alexa Voice Service with Alexa Skills Kit➢ Product developed into Alexa Gadgets Toolkit and made available for commercial use <div>AWS SQS AWS Lambda AWS IAM Maven Raspberry Pi</div> |
| August 2016
May 2016 | Engineering Practicum Intern Google, KIRKLAND, WA <ul style="list-style-type: none">➢ Worked on the Ads: Engineering Productivity Team➢ Constructed an infrastructural tool for dependency tracking and visualization <div>Java DevOps</div> |

RESEARCH

- | | |
|--------------------------------|--|
| May 2019
January 2017 | Graduate Researcher Prof. Dawn Song, BERKELEY, CA <ul style="list-style-type: none">➢ Led the project for SENTINEL, a scalable and decentralized platform for data governance➢ Worked on DUET, a type system for enforcing differential privacy on higher-order programs <div>Differential Privacy Machine Learning Secure Hardware</div> |
| August 2018
March 2018 | Summer Undergraduate Research Fellow Prof. Olga Holtz, BERKELEY, CA <ul style="list-style-type: none">➢ Explored properties of border rank in tensors for improving complexity of matrix multiplication➢ Implemented approximation algorithms for tensor rank using alternating least squares <div>Tensor Decomposition Convex Optimization Complexity Theory</div> |
| November 2015
November 2014 | Undergraduate Researcher Prof. Ken Goldberg, BERKELEY, CA <ul style="list-style-type: none">➢ Worked in UC Berkeley's Lab for Automation Science and Engineering➢ Implemented stable pose computation and binary image processing algorithms for object detection and helped generate massive open-source point mesh datasets as a part of the Dex-Net Project <div>Computer Vision Robotics Data Mining</div> |

EDUCATION

- | | |
|-----------|--|
| 2018-2019 | Master of Science in Electrical Engineering and Computer Science (3.95 / 4.0), UC BERKELEY
<i>Relevant Coursework:</i> Secure Hardware, Deep Reinforcement Learning, Computer Vision |
| 2014-2018 | Bachelor of Science in Electrical Engineering and Computer Science (3.84 / 4.0), UC BERKELEY
<i>Relevant Coursework:</i> Operating Systems, Databases, Data Structures, Algorithms, Security |
| 2014-2018 | Bachelor of Science in Engineering Mathematics and Statistics (3.82 / 4.0), UC BERKELEY
<i>Relevant Coursework:</i> Probability Theory, Convex Optimization, Linear Algebra, Stochastic Processes |

PUBLICATIONS

1. Near, J.P., Darais, D., Abuah, C., Stevens, T., Gaddamadugu, P., Wang, L., Somani, N., Zhang, M., **Sharma, N.**, Shan, A. and Song, D., October 2019. DUET: A LANGUAGE AND TYPE SYSTEM FOR STATICALLY ENFORCING DIFFERENTIAL PRIVACY. *OOPSLA 2019*.
2. **Sharma, N.**, SENTINEL: A SYSTEM FOR DECENTRALIZED DATA GOVERNANCE, EECS Department, University of California, Berkeley, Tech. Rep. UCB/EECS-2019-77, May 2019.

TEACHING

2016-2018	Computer Science 188	Introduction to Artificial Intelligence, UC BERKELEY
2018	Computer Science 170	Algorithms and Intractable Problems, UC BERKELEY
2017	Computer Science 168	Internet Architecture and Protocols, UC BERKELEY
2015-2016	Computer Science 70	Discrete Mathematics and Probability Theory, UC BERKELEY

PROGRAMMING LANGUAGES

Python	●	●	●	●	●
Java	●	●	●	●	●
Javascript / Web	●	●	●	●	●
Golang	●	●	●	●	○
Rust	●	●	●	●	○
C / C++	●	●	●	●	○

HONORS SOCIETIES

- > Tau Beta Pi Engineering Honors Society
- > Eta Kappa Nu EECS Honors Society

TEST SCORES

- > SAT: 2360
- > GRE: 339

INDEPENDENT PROJECTS

ENACT SYSTEMS SHADING ALGORITHM

JANUARY 2018

[Enact Shading Algorithm](#)

Worked as a consultant developer for Enact Systems, a software platform for solar projects. Derived and implemented a production-grade algorithm for 3D spatial analysis which is used to optimize panel placement around rooftop obstructions.

3D Geometry Python

COMPUTER SCIENCE 188 COURSE TEXTBOOK

AUGUST 2016

[Introduction to Artificial Intelligence](#)

Primary author of the official course textbook for CS 188: *Introduction to Artificial Intelligence* at UC Berkeley (wrote 8 of 10 chapters). The textbook is used by 700-800 students each semester.

Artificial Intelligence 

AWARDS AND SCHOLARSHIPS

May 2019	Certificate in Entrepreneurship and Technology - An award for UC Berkeley students who demonstrate excellence in technology entrepreneurship.
March 2018	Outstanding Graduate Student Instructor Award - An award to honor UC Berkeley GSIs each year for their outstanding work in the teaching of undergraduates, nominated from within each teaching department.
October 2017	Accel Fellowship - A program for providing unparalleled opportunities for students to grow and develop in unique ways by bridging technology, business, academics, and real world experiences.
July 2014	UC Berkeley Leadership Award - A merit-based scholarship that recognizes Cal students who demonstrate innovative, motivational leadership impacting their academic, work, or community environments.
March 2014	Regents' and Chancellor's Scholarship - The most prestigious scholarship awarded by the University of California, Berkeley to entering undergraduates.

VOLUNTEERING

2018-2019	EECS Department Delegate - Serve as a delegate on UC Berkeley's Graduate Assembly, helping draft and pass resolutions relating to graduate affairs including budget allocation, housing, and student groups.
2016-2018	Campus Outreach - Served as a mentor for prospective students to UC Berkeley through programs such as <i>EECS Day</i> , <i>Shadow a Math Major Day</i> , and <i>Regents' Overnight Stay Program</i>