Nikhil Sharma Researcher, Developer, and Educator

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PROFESSIONAL EXPERIENCE

Present	
October 2018	

Software Engineer | Oasis Labs, BERKELEY, CA

> Working on a privacy-first cloud computing platform on blockchain.

Smart Contracts FPGA Node.js Golang

August 2018 May 2018

Software Engineering Intern | Google, MOUNTAIN VIEW, CA

- > 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 Bootstrap | jQuery | jslayout | C++ | Google Charts

August 2017 May 2017

Software Development Intern | Amazon Lab 126, SUNNYVALE, CA

- > 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

AWS SQS AWS Lambda AWS IAM Intellij Maven Raspberry Pi

August 2016 May 2016

Engineering Practicum Intern | Google, KIRKLAND, WA

- > Worked on the Ads: Engineering Productivity Team
- > Constructed an infrastructural tool for dependency tracking and visualization

Java Eclipse Dependency injection RPC



August 2018 March 2018

Summer Undergraduate Research Fellow | Prof. Olga Holtz, BERKELEY, CA

- > Explored properties of border rank in tensors for improving complexity of matrix multiplication
- > Implemented approximation algorithms for tensor rank using alternating least squares

Tensor Decomposition Convex Optimization Complexity Theory

May 2018 January 2017

Undergraduate Researcher | Prof. Dawn Song, BERKELEY, CA

- > Worked on developing a scalable and distributed pipeline for machine learning which automatically enforces user-specifiable differential privacy guarantees
- > Paper in submission to PLDI 2019

Differential Privacy | Machine Learning | SGX Enclaves

November 2015 November 2014

Undergraduate Researcher | Prof. Ken Goldberg, BERKELEY, CA

- > 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

Image Processing Robotics Data Mining



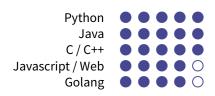
EDUCATION

2018-2019	Master of Science in Electrical Engineering and Computer Science (4.0 / 4.0), UC BERKELEY		
	Relevant Coursework: Secure Hardware, Deep Reinforcement Learning, Computer Vision		
2014-2018	Bachelor of Science in Electrical Engineering and Computer Science (3.8 / 4.0), UC BERKELEY		
	Relevant Coursework: Operating Systems, Databases, Data Structures, Algorithms, Security		
2014-2018	Bachelor of Science in Engineering Mathematics and Statistics (3.8 / 4.0), UC BERKELEY		
	Relevant Coursework: Probability Theory, Convex Optimization, Linear Algebra, Stochastic Processes		



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



♦ 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 total chapters). The textbook is used by 700-800 Berkeley students in the course each semester.

Artificial Intelligence AT_FX

Awards and Scholarships

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.

MEDIA COVERAGE

"MEET THE MATH TEAM: SUMMER UNDERGRADUATE RESEARCH FELLOWS"

DECEMBER 2018

https://ls.berkeley.edu/sites/default/files/mps_newsletter_2018.pdf By Melanie VandenBerghe. Division of Mathematical and Physical Sciences.

"Accel Launches UC Berkeley Mentorship Program"

NOVEMBER 2017

https://techcrunch.com/2017/11/01/accel-launches-uc-berkeley-mentorship-program/ By Katie Roof. Techcrunch.



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 EECS Day, Shadow a Math Major Day, and Regents' Overnight Stay Program