# Nikhar Arora

Email: nikyarora@berkeley.edu | Mobile: (650)919-4010 | Github:@nikyarora | Linkedin: @nikhararora

## EDUCATION

**University of California, Berkeley** *Graduation*: May 2021

***Degrees*:** BS, Electrical Engineering and Computer Science, College of Engineering
BS, Business Administration, Haas School of Business

## EXPERIENCE

***McKinsey & Company, Summer Digital Analyst*** *May 2020 – Aug. 2020*

- Guided digital business strategy for a Fortune 500 client to decrease company operational costs by 15%, including Agile project management.
- Architected and developed .NET Web APIs and Angular PWAs; Responsible for Dev Ops, including automated testing, build/release pipelines.

***Google, Software Engineering Intern*** *May 2019 – Aug. 2019*

- Increased recommendation model CTR by 1-3% daily by training new model, running model validation, and pushing to production daily.
- Migrated the Google News content recommendation and user engagements machine learning model into a TensorFlow Extended pipeline.
- Technologies: Python, TensorFlow, TensorFlow Extended (TFX), Deep Neural Networks

***Google, Engineering Practicum Intern*** *May 2018 – Aug. 2018*

- Increased face detection speeds within Google Photos iOS by 14x through designing and implementing a single shot convolutional neural network on the GPU. Developed a testing framework in TensorFlow to compare results from mobile application.
- Technologies: Python, TensorFlow, C++, Objective C, Metal Performance Shaders, Convolutional Neural Networks

***CK12 Foundation, Interactives Intern*** *June 2017 – May 2018*

- Build over 50 interactive learning resources for CK-12's e-textbooks with animations, movable objects, graphs, buttons, scripted using Javascript with design components created using Adobe Illustrator and Photoshop. Subjects range included Elementary Math, Algebra, and Calculus.
- Developed free visual learning tools used by students and teachers nationally and internationally across 5 e-textbooks.

***UCSC DANSER Lab, Intern*** *June 2016 - Aug. 2016*

- Constructed a mobile network of nodes, programmed using C++, for real-time navigation of autonomous robotic rovers through researching methods of RF Localization to track radio signals (RSSI) between nodes in the network. Calibrated the robotic network using Python.
- Created a low-cost ($30) system that can be used for industrial applications such as hospitals, warehouses, factories, and UAV navigation.

***Stanford Robotics Lab, Intern*** *May 2015 – Aug. 2015*

- Implemented computer vision planar detection methods using C++ and Point Cloud Library to detect specific shapes and objects in order to identify obstacles in a robot's field of vision with applications in autonomous robot movement.

## CO-CURRICULAR ACTIVITIES/LEADERSHIP

***Mobile Developers of Berkeley, President*** *Jan. 2018 – Present*

- Raised over $20,000 for the organization by negotiating and managing mobile contracts for the organization; Instruct marketing and fundraising teams on new avenues for professional growth and club recognition; Increase website engagement by 50% in redesign (mdb.dev)
- Plan, design, and develop iOS apps for UC Berkeley's premier mobile development incubator in 6-week intensive training program.
- Developed trivia game for member-matching, Pokédex app containing searchable/sortable data on Pokémon, MDBSocials, featuring member login system and real-time BaaS database (Firebase) for tracking socials/events, and Preserve, featuring OCR scanning and real-time Firebase.

***Engineers Without Borders – UC Berkeley, President*** *Aug. 2017 – May 2019*

- Organized club-wide meetings, events, fundraisers, managed club's social media presence, led club recruitment efforts, sourced new projects.
- Raised over $30,000 in sponsorships and crowdfunding efforts; Led recruitment efforts to bring in 54 new members over 2 semester.
- Designed and mapped out water distribution systems for impoverished communities lacking clean water in Panama, Peru, and Nicaragua.

***Photographer*** *Aug. 2015 – Present*

- Published over 20 photos of major events on UC Berkeley's campus as a member of the photography staff of *The Daily Californian*.
- Regularly maintain an online portfolio of personal images, the link for which is available here: (nikhararora41.wixsite.com/photography)

***Menlo School Robotics Club, Co-Founder and Vice President*** *Sep. 2013 – June 2017*

- Founded First Tech Challenge club and which grew from 4 to 53 members during time of leadership, winning numerous competitions.
- Created curriculum to mentor economically disadvantaged 5th grade students in robotics using Lego Mindstorms at the Taft School.

## PROJECTS

***Preserve*** *April 2018 – Aug. 2018*

- Developed and shipped an iOS app that uses OCR receipt scanning to remind users of upcoming expiration dates for purchased items.
- Implemented an expiration date prediction algorithm to assist with onboarding difficulties after scanning.

***Chatitude*** *Dec. 2017*

- Won at YHack 2018 for a sentiment analysis chat app. Implemented IBM Watson API (devpost.com/software/chatitude)

***Applied Science Research*** *Aug. 2016 – May 2017*

- Designed and programmed a fused filament fabrication 3D printer designed using Arduino IDE and AutoCAD Inventor.
- Built a laser triangulation 3D scanner using Point Cloud Library imaging and Blender 3D reconstruction software.

## PROFESSIONAL SKILLS

Java, Python, Swift, JavaScript, R, SQL, Objective C, C++, MATLAB, Golang, Assembly (RISC-V), TensorFlow, TFX, Metal Performance Shaders, Point Cloud Library, AutoCAD, Adobe Illustrator/Photoshop, Deep Learning, Convolutional Neural Networks, Firebase, WordPress, Microsoft Office

## COURSEWORK

**CS170** - Algorithms, **CS61C** - Computer Architecture, **CS61B** - Data Structures, **CS70** - Discrete Math and Probability Theory, **UGBA 103** - Finance, **CS182** - Neural Networks, **EECS 127** - Convex Optimization, **CS161** - Computer Security, **CS189 -** Machine Learning, **UGBA 106** - Marketing, **UGBA 196** - Sports Management, **UGBA 104** - Business Analytics, **UGBA 102A -** Financial Accounting, **UGBA 135 –** Personal Finance