

Ayush Jain

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EDUCATION

UNI. OF SOUTHERN CALIFORNIA

APPLIED AND COMPUTATIONAL MATH

MINOR IN PRODUCT DESIGN

Expected May 2021

Lavalab (Startup Accelerator)

Scope (Computer Science Org.)

HONORS & AWARDS

GOOGLE FOOBAR

Recruitment Challenge

HP CODE WARS

1st Place

MAKE HACKS

Social Network Award

ANGELHACK

Myo & Autodesk Award

SKILLS

PROGRAMMING

Languages

Python • C++ • Java

Javascript • SQL • HTML/CSS

Libraries & Frameworks

OpenCV • Numpy/Pandas/Scipy/Tensorflow

NodeJS • Angular • Firebase

PROJECTS

SCRIBE

HackingEDU

An optical character recognition program for helping students study from their textbooks. Uses Google Tesseract and word2vec to convert pictures from a textbook page into a practice quiz.

BUTLER

Los Altos Hacks

A slackbot for managing teams. Used natural language processing (via wit.ai) to parse intents and manage Github/Slack organizations. Built the dashboard using Angular and server using Node.

PATENTS

BINARY FLASH TARGETING

Patent No. 15246258

EXPERIENCE

CAPE ANALYTICS | SOFTWARE ENGINEERING (CV) INTERN

May 2018 – August 2019 | Mountain View, CA

- Automated & optimized road-network graph simplification, speeding up a single tile run from 40s down to 6s (Millions of image tiles are extracted).
- Developed new method of spur removal from extracted road networks, producing optimal graph geometry for rapid geographical querying.
- Implemented methods of contour simplification (hough transforms, constraints, RANSAC) as well as metrics (Hausdorff, Frechet, etc.) to determine an optimal method of simplifying building roof geometry [Resulting in around 90% decrease in database space consumption].

FALKONRY | SOFTWARE ENGINEER

(PREV. DATA SCIENCE INTERN)

September 2017 – April 2018 | Sunnyvale, CA

- Isolated early warning patterns in EEG data of epilepsy patients to predict onset of epileptic seizures (Presented findings at Oracle Open World).
- Automated core algorithm and data management testing using Jenkins (Revealed a regression in model output).
- Engineered signal preanalyzer to determine an optimal subset of signals to be used in training data. Utilized Docker and Shippable to automate development and deployment pipeline. Integrated Oauth and Tornado proxies to whitelist Falconry users and save user files/settings.

DRONESDASH | CTO & Co-FOUNDER

July 2016 – August 2017 | Menlo Park, CA

- Spearheaded core product development including an in-house built drone, a coordinated drone network, and client-side app built with React Native.
- Developed computer vision solutions using OpenCV, Pandas, and Scikit to authenticate users in realtime during delivery (from 150 feet in the air).

TECHLAB EDUCATION | SOFTWARE ENGINEERING INTERN

May 2015 – August 2015 | Saratoga, CA

- Led programming classes teaching teens Java, Python & Web Dev.
- Collaborated alongside intern team to redesign the Techlab website using ReactJS and custom HTML components.

RESEARCH

DEXTO | ELECTROMYOGRAPHY RESEARCH

July 2016 – December 2016 | Cupertino, CA

- Developed a prosthetic modeling and positioning software.
- Implemented naive bayesian classifier and low pass filters to interpret real time electromyographic signals into gesture events.

ISTITCH | COMPUTER VISION + DIABETES RESEARCH

June 2015 – August 2015 | Saratoga, CA

- Collaborated with an M.D. Candidate to develop a classifier to identify patients with diabetes from corneal imagery.
- Used OpenCV for image stitching and decision trees to calculate fiber tortuosity and branch density of nerve endings.