Calvin Yan

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EDUCATION
Computer Science 2023 | UC Berkeley
Current coursework: Stucture and Interpretation of Computer Programs **(CS 61A),** Designing Information Devices and Systems I **(EECS 16A)**
GPA: N/A

EXPERIENCE
Research Intern | Stanford Department of Radiology
Apr - Oct 2017
- Worked under professor Daniel Rubin to develop a random forest classifier in MATLAB to predict the progression time of advanced macular degeneration in patients
- Compiled academic research papers on related classification pipelines to provide a baseline of comparison for our team's model
- Surpassed baseline performance with an area under the receiver operating charateristic curve of 0.92

Programmer | Palo Alto High School FIRST Robotics Competition (FRC)
Oct 2016 - Mar 2019 (Hardware team May 2015 - Sep 2016)
- Developed a computer-vision-assisted driving interface to align the robot to reflective scoring targets, decreasing scoring cycle times by 50-67%
- Implemented a research paper on novel motion planning techniques to increas speed and accuracy of autonomous driving , helping triple our robot's offensive capability in the autonomous portion of the contest
- Oversaw team relations with sister school Townley Grammer School, organizing a lab tour for 50 visiting Townley students

Board of Directors | Teens Exploring Code
Apr 2016 - Feb 2018
- Presided over a nonprofit organization planning beginner-oriented hackathons serving 75 students a year
- Co-wrote a successful proposal for a $2000 grant from the City of Palo Alto
- Designed and presented educational workshops covering rudimentary Python and the Git workflow

Platinum Division | USA Computing Olympiad
Dec 2015 - Apr 2019
- Competed in monthly programming contests in a division representing the 85th percentile of all participants
- Trained to quickly implement the following algorithms and data structures: Djikstra's algorithm/A*, Kruskal's algorithm, dynamic programming, binary indexed trees, disjoint sets,
- Hosted 10 students in a competitive programming club teaching theoretical computer science concepts in preparation for the lower divisions of USACO

PROJECTS
OCR in E-Sports Analytics | Smashscan
Jul 2019 - Present
- Use machine learning to mine data from match footage of popular video game Super Smash Brothers Melee
- Retrained an open-source character recognition model over in-game font, increasing accuracy from 66% to 98%
- Created a noise correction algorithm to identify and adjust incorrect classifications based on past and present

Object Detection, Classification, and Localization | Unmanned Aerial Vehicles @ Berkeley
Sep 2019 - Present
- Compete for the first time in AUVSI SUAS, an international autonomous drone competition
- Develop an image processing pipeline to Identify shape, color, and alphanumeric symbol of ground targets captured by drone photography and compute their position using telemetry

SKILLS
Programming languages: Python, Java, MATLAB, HTML, SQL
Libraries: OpenCV, Numpy, Pandas, Matplotlib, Tesseract, Tensorflow, Scikit-learn
Miscellaneous: Git, Vim, Android Studio, InDesign, Mandarin