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# Bill Zhou

## Highlights

- Experience in applied software development. Award winning projects.
- Strong teamwork/communication skills. Served in college and high school student government
- Solid academic background. Cal Alumni Scholar. Dean's Honor, National AP Scholar.
- Table Tennis National Junior Team Member

## EDUCATION

**UC Berkeley**  
Computer Science  
Class of 2018

**GPA:** 3.94  
**Relevant Coursework:** Structure and Interpretation of Computer Programs (CS61A), Linear Algebra and Differential Equations (MATH54), Data Structures and Advanced Programming (CS61B), Discrete Mathematics and Probability Theory (CS70)  
**Awards:** Cal Alumni Scholarship 2015, Dean's Honor (Top 4% of undergraduates)

## PROFESSIONAL SKILLS

**Languages**

Python, C++, Java, SQL, HTML, CSS, PHP, Javascript

**Platforms / Tools**

Linux, Windows, Android, OpenCV, Qt, Numpy, SciPy

## PROJECTS

**Heads Up Display on Lumus AR Glasses**  
OpenCV/ C++/ Unity

- Contributed to augmented reality solution enabling fluid human interaction with 3D holograms
- Achieved robust finger tracking under any lighting condition with visible background interference
- Implemented algorithm for palm tracking under all postures by examining deformities in convex hull with respect to nearby curvature magnitudes
- Developed real-time hand gesture detection by representing hand movements as time series data classifiable with custom Dynamic Time Warp models.

**Traffic Hazard Detection using In-Context Recognition**  
OpenCV/ C++/ Qt

- Created cross-platform system capable of warning drivers of traffic hazards
- Rapidly classified road signs, vehicles, and pedestrians with contour shapes supported by Haar Cascade
- Recognized turn signal by analyzing periodic saturation and luminosity changes on identified vehicles
- Boosted accuracy by isolating areas of likely hazard occurrence based surrounding context

**Image Manager**  
Python/ PyQt/ DBMS

- Designed and implemented an automated photo labeling and retrieval system to minimize human errors in Monta Vista yearbook's publication workflow
- Implemented natural language search engine allowing user to search photos by their content
- Connected desktop application to web interface providing real time updates to staff members
- Packaged application into executable independent of the Python interpreter to maximize compatibility

## EXPERIENCE

**RESEARCHER**  
Virtual Reality @ Berkeley  
UC Berkeley, California

- Worked under Dr. Allen Yang on hand tracking and gesture recognition in AR 2015 - Present
- Project goal to assemble augmented reality interface for 3D human interaction
- Collaborated with a team of 18 using Git and Slack

**EVENT COORDINATOR**  
SUPERB Productions  
UC Berkeley, California

- Planned university wide recreational events for students of UC Berkeley 2015 - Present
- Worked with contractors to bring large scale games (i.e. laser tag) to campus
- Handled logistics for scheduling, costs, and equipment booking

**STUDENT OUTREACH**  
ASUC  
(Associated Students of University of California)  
UC Berkeley, California

- Created publications to increase operational transparency of the ASUC 2015 - Present
- Collaborated with a team on creating marketing campaign to re-brand the ASUC
- Conducted user experience studies on effectiveness of new ASUC programs

**MARKETING DIRECTOR**  
HSHacks (Hackathon)  
Menlo Park, California

- Executed marketing campaign and attracted over 1000 attendees to the hackathon 2013 - 2014
- Managed event and sponsorship logistics
- Directed media coverage of event