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# Bill Zhou

## Highlights

- Strong software engineering skills. Winner of Berkeley Skydeck's AR Pitch competition
- Strong teamwork/communication skills. Team lead of open sourced AR project.
- Solid academic background. Dean's Honor. Cal Alumni Scholar. National AP Scholar

## EDUCATION

**UC Berkeley**  
M.S. EECS

**GPA:** 3.87 Aug 2018 - Present  
**Advisers:** Prof. S. Shankar Sastry, Allen Y. Yang  
**Thesis:** *Real-time Tracking of Deformable Human Avatars by Fusing Low-Dimensional 2D and 3D Kinematic Models*

**UC Berkeley**  
B.A. Computer Science

**GPA:** 3.83 Aug 2015- May 2018  
**Relevant Coursework:** Advanced Architecture and Systems (CS262), OS (CS162), Machine Learning (CS189), Natural Language Processing (INFO159) Algorithms (CS170)  
**Awards:** Cal Alumni Scholarship, Dean's Honor (Top 4% of undergraduates)

## WORK EXPERIENCE

**SOFTWARE ENGINEERING INTERN**  
Facebook  
Seattle, Washington

- Member of the Search NLP team developing distributed memory capabilities May 2018 - Aug 2018
- Redesigned query expansion component to retrieve NLP models from distributed memory on demand rather than preload into local memory
- Diminished the network impact to +0.3 milliseconds through implementation of massively parallel processing and order agnostic pre-ranking
- Allowed Facebook Search to tailor to trending events within ~15 min rather than hours through enabling real time backend model hot swap

**SOFTWARE ENGINEERING INTERN**  
Google  
New York City, New York

- Member of the Local Discovery team developing unsupervised language models to capture latent sentiments in user reviews May 2017 - Aug 2017
- Developed deep neural network to featurize 5.5 million English review texts into continuous low dimensional vectors
- Increased Google Maps attribute coverage by 14 million across 400,000 unique businesses with vectorized user reviews as an additional inference signal
- Directly impacted the quality of local queries and related places

**SOFTWARE ENGINEERING INTERN**  
Salesforce  
San Francisco, California

- Member of the Core Infrastructure team developing Salesforce's continuous deployment pipeline May 2016 - Aug 2016
- Implemented new delivery mechanism to prioritize the decompression order of artifacts based on change velocity
- Developed "linked containers" to share common dependencies between multiple application containers while maintaining mutual isolation
- Reduced Salesforce core app (9 GB) deploy time by 40%

## PROJECTS

**Pengram AR**  
C# / OpenCV/ HoloLens  
pengramar.com

- Designed and developed a system that allows field technicians and remote experts to collaborate in real time through augmented reality
- Created a cross-platform application that enable users to virtually share their physical workspace
- Led user studies with Siemens, State Grid, and Honda, to understand their painpoints
- 1st place in Mixer Reality category in Microsoft Imagine Cup 2018 Internationals

**OpenARK (Augmented Reality Kit)**  
C++ / OpenCV / PCL  
vivecenter.berkeley.edu

- Designed a suite of augmented reality algorithms to enable fluid human interaction with 3D holograms
- Developed real-time planar surface classification through delaunay triangulation of supervoxels (computes over 110 surface regression models per second).
- Enhanced finger tracking to operate under any lighting condition with false-positive interference
- Demo project created with OpenARK can be found on <http://billzhou.me/openark>

## LEADERSHIP

**PRESIDENT**  
Virtual Reality @ Berkeley  
vr.berkeley.edu

- Responsible for strategic decision in annual VR convention and development of Berkeley's first AR/VR class (EECS 198) Oct 2016 - May 2018
- Worked to establish industry partnership with Intel, Oculus, Microsoft, Siemens, and DJI
- *Past: VP of Operations, Director of Membership*