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# Ningjian (Bill) Zhou

*Highlights*

- Excellent software engineering skills. Winner of Berkeley Skydeck's Pitch Competition
- Strong leadership. President of VR@Berkeley and Team lead of open sourced AR project
- Solid academic background. Dean's Honor. Cal Alumni Scholar. National AP Scholar

## EDUCATION

**UC Berkeley**
B.A. Computer Science
Aug 2015 - May 2018

GPA: 3.73
Relevant Coursework: Advanced Topics in Systems (CS262), Computer Security (CS161), Machine Learning (CS189), Algorithms (CS179), Natural Langauge Processing (INFO159), Operating Systems (CS162)
Awards: UPE (CS Honor Society), Cal Alumni Scholarship, Dean's Honor (Top 4% of undergraduates)

## WORK EXPERIENCE

**SOFTWARE ENGINEERING INTERN**
Facebook
Seattle, Washington

May 2018- Aug 2018

- Incoming software engineering intern summer 2018

**SIEMENS RESEARCH FELLOWSHIP**
Center for Augmented Cognition
UC Berkeley, California

Aug 2016 - Present

- Worked under Prof. S. Shankar Sastry and Dr. Allen Yang to Designed a suite of augmented reality algorithms to enable fluid human interaction with 3D holograms
- Innovated tactile feedback experience in augmented reality
- 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 billzhou.me/openark

**CO-FOUNDER**
Pengram Inc.
San Francisco, California

Oct 2017- Present

- Designed and developed a system that allows field technicians and remote experts to collaborate on maintenance tasks in real time augmented reality
- Implemented automatic spatial synchronization based on PWP3D to align remote 3D models with onsite physical objects that possess sparse surface features
- Conducted user research with representatives from Siemens, State Grid, Honda, and Johnson Controls on their business needs
- Winner of Berkeley Skydeck's AR Pitch competition and a $10k funding package

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

May 2017 - Aug 2017

- Member of the Local Discovery team developing unsupervised language models to capture latent sentiments in user reviews
- 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

**May 2016 - Aug 2016**

- Member of the Core Infrastructure team developing Salesforce's continuous deployment pipeline
- 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%

## LEADERSHIP

**President**
Virtual Reality @ Berkeley
UC Berkeley, California
Aug 2017 - Present

- Responsible for aligning operational strategies with organizational goals
- Led cross functional teams to start a VR convention and Berkeley's first VR class (EECS 198)
- Spearheaded community outreach event to local disadvantaged youth through collaboration over a U.S State Department grant (tech in the tenderloin)
- Hosted the first VR focused convention (Virtual Experience Convention) selling over $8k in tickets and secured speakers from Intel, Magic Leap, Sony, etc.
- Established industry partnership with Intel, Oculus, Microsoft, Siemens, and DJI.

**Project Team Lead**
Center for Augemented Cognition
UC Berkeley, California
Aug 2016 - Present

- Led an interdisciplinary team of 10 researchers organized into 3 groups
- Orchestrated successful rollouts of beta versions of the AR SDK for early adopters 1.5 month ahead of schedule
- Expanded the scope of the project by building a comprehensive test module to benchmark performance
- Represented the lab in meetings with Siemens, Huawei, and State Grid to secure a dditional funding for the project

**VP of Strategy & Operation**
Vritual Reality @ Berkeley
UC Berkeley, California
Aug 2016 - May 2017

- Responsible for aligning operational strategies with organizational goals evangelize VR/AR technology, develop strong industry relations, engaging undergraduates in graduate level research)
- Boosted membership and retention rate through diversifying focus from pure research to include art, storytelling, and animations
- Worked to establish partnership with Berkeley Center for Augmented Cognition and Intelligence Machines Lab

**Student Outreach**
ASUC
UC Berkeley, California
Aug 2015 - May 2016

- Created newsletters and live-streamed ASUC Senate meetings to increase operational transparency of the organization
- Collaborated with a team on creating a digital presence for the ASUC which traditionally relied on flyers and posters
- Drove engagement among students through social media campaigns and tabling

**University Event Coordinator**
ASUC
UC Berkeley, California
Aug 2016- May 2016

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

## PERSONAL PROJECTS

**AR Telemedicine**
Hololens / C# / Unity
Oct 2016- Fed 2017

- Created prototype AR collaboration tool to replaced traditional video call telemedicine
- Implemented system to synchronize virtually placed annotation for up to 5 doctors in real-time
- Created recording feature allowing surgical procedures to be recorded with AR annotations from first or third person perspective
- Conducted user studies with 19 doctors across 5 different field of practice
- Boosted accuracy by isolating areas of likely hazard occurrence based surrounding context

**Traffic Hazard Detection**
OpenCV / C++ / Qt
Aug 2015 - Jan 2016

- Created mobile 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