

ANDREW ZHANG

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EDUCATION

University of California, Santa Barbara (UCSB) *Santa Barbara, CA*

- Bachelor of Science in Computing, College of Creative Studies June 2020
 - GPA: 4.00 | Awards: Regents Scholar
- Master of Science in Computer Science Expected June 2021

WORK EXPERIENCE

Microsoft Software Engineering Intern *Redmond, WA* June 2019 – September 2019

- Increase efficiency of a component registration process for MyAnalytics developers by removing duplicate map registration
- Integrate AutoMapper library to reconcile a single registration for multiple use cases

NASA Jet Propulsion Laboratory OpsLab Intern *Pasadena, CA* June 2018 – August 2018

- Contributed to HoloLens augmented reality application enabling scientists to work virtually on the surface of Mars
- Formulated more efficient methods of manipulating textured meshes for generating Martian terrain
- Polished a HoloLens augmented reality application for visualizing proposed orbits of NASA's upcoming Europa Clipper mission
- Experimented with SpectatorView, an iOS application allowing users to experience the same holograms as a HoloLens user

Experimental Cosmology Lab Programmer *UCSB, Santa Barbara, CA* October 2017 – February 2018

- Developed control code for telescope that will be deployed in Greenland to measure the polarization of emission from the galaxy

PROJECTS

Python Garbage Collector Analysis *UCSB, Santa Barbara, CA* April 2020 – June 2020

- Understood how CPython and PyPy garbage collectors functioned and how to modify their parameters
- Profiled the garbage collectors to examine their performance in different use cases
- Created a custom visualizer to see the performance effects of changing garbage collector thresholds

Augmented Reality Physics Classroom *UCSB, Santa Barbara, CA* January 2019 – March 2019

- Create HoloLens augmented reality application for high school physics curriculum, exploring projectile motion
- Experiment with Vuforia to design intuitive and easy-to-use control interface

Tennis Ball Tracking App *UCSB, Santa Barbara, CA* November 2017 – August 2019

- Built an application that measures the speed of a tennis ball using a mobile device's and laptop's camera feed with less than 20% discrepancy in some cases
- Learned OpenCV library, background subtraction, optical flow and Android development to help create a reliably functioning app

LA Hacks *UCLA, Los Angeles, CA* March 2018

- Designed web application that translates English phrases to a random language, using Google Cloud Platform's App Engine and Machine Learning Translation API

SB Hacks *UCSB, Santa Barbara, CA* January 2018

- Designed web application that stores bathroom quality reviews in a database and displays the reviews for the user

ADDITIONAL EXPERIENCE

SB Hacks Sponsorship Team Lead and Organizer *UCSB, Santa Barbara, CA* December 2018 – Present

- Collaborate with team of 10 to organize SB Hacks, an annual 36-hour hackathon at UCSB that hosts over 400 students
- Created live page for SB Hacks V using Node, HTML, and CSS to provide attendees with information and updates during the event
- Direct our sponsorship strategies and manage the \$40k+ budget for SB Hacks VII

Undergraduate Computer Science Mentor *UCSB, Santa Barbara, CA* April 2018 – March 2020

- Mentored and tutored students in introductory Python on programming assignments
- Assisted students one-on-one and in groups with greedy, recursive, and dynamic programming algorithms and NP-Completeness
- Examined current research in computer science education, discussing applications at UCSB with faculty

TECHNICAL SKILLS

- Python, C#, C++, Java, Unity, Android