

# Bianca Yang

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## **Education:**

**Caltech** — Computer Science

**June 2019 (Expected)**

## **Skills:**

Programming Languages: Python, C++, Bash

Software Frameworks: Matlab, ROS

Other: 3D Printing, Laser Cutter, Water Jet

## **Experiences:**

**Student, ME/CS/EE 134**

**Jan 2019 - March 2019**

- Built a 5DOF robotic arm that uses a webcam powered by OpenCV to detect blocks and stack them into a pyramid shape. Developed kinematics from scratch and used ROS framework. See video and writeup [here](#).

**Software Engineer, Caltech DARPA Subterranean Challenge Team**

**Oct 2018 - Present**

- Researching efficient methods to collapse information about rough terrain into a cost map that could be used by motion planners to guide a ground robot.

**Student Researcher, Caltech, Perona Lab**

**Oct 2018 - Present**

- Researching machine learning techniques which can minimize power usage of hierarchical sensor systems that track infrequent events.
- Current implementation is a Raspberry Pi module with a camera, ultrasonic distance sensor, PIR motion sensor, 8x8 IR grid, and proximity sensor for deployment in the lab.

**Cloud + AI Software Engineering Intern, Microsoft**

**Jul 2018 - Sept 2018**

- Improved scheduling times and monitoring of distributed GPU system for deep learning jobs by introducing blacklisting to prevent jobs from repeatedly attempting to schedule against unusable nodes.
- Improved resource utilization and machine status tracking in web portal using Angular/[ASP.net](#)/Typescript.

**Machine Learning Researcher, Caltech CS159 Course**

**March 2018 - June 2018**

- Evaluated various network architectures for multi-task reinforcement learning of variants on inverted cartpole/pendulum with A3C as the baseline algorithm. Read our report [here](#).

**Machine Learning Consultant, Virtualitics**

**Jan 2017 - June 2018**

- Developed machine learning suite to improve efficiency of consulting projects.
- Created distributed grid search framework for faster training and evaluation of machine learning models.

**Co-President and Board Member, Caltech Student Investment Fund**

**Oct 2015 - June 2018**

- Wrote value investing based [curriculum](#) to prepare fund members to manage \$750K endowment.
- Managed annual disbursements and arranged annual speaker series.

**eCommerce Marketing Manager, Efficient Living**

**Jun 2015 - Dec 2017**

- Expanded Japanese business through Fulfillment by Amazon and managed digital marketing campaign to drive sales.
- Launched online retail business for whiskey lovers.

**Quantitative Research Associate, Fuller & Thaler Asset Management**

**Jul 2017 - Sept 2017**

- Created natural language processing algorithm to analyze financial news and SEC filings to improve returns.

**Awards:**

**3rd Place, SoCal Citadel Data Open**

**Oct 2018**

**Hobbies:**

**Student Pilot, Caltech/JPL Flying Club Member (AACIT)**