

DAPHNE POON

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EDUCATION

Harvey Mudd College – *Claremont, CA*

Expected Graduation: May 2021

Bachelor of Science in Computer Science and Math

3.76 GPA

- Hong Kong Scholarship for Excellence awardee (> \$30,000 USD per year).
- Relevant coursework: Autonomous Vehicles, Engineering Systems, Engineering Mathematics, Experimental Engineering, Data Structures and Program Development, Computability and Logic (Fall 2019)

WORK EXPERIENCE

Dropbox – *San Francisco, CA*

May 2019 - August 2019

Software Engineering Intern – Search Infrastructure

- Improved user experience for an estimated 10% of Dropbox searches by building backend functionality in Golang to allow filtering by co-workers' most recently edited files.
- Achieved a 1000x speed up on an HBase backfill over trillions of edits on files by parallelizing batch runs.

Lab for Autonomous and Intelligent Robotics – *Claremont, CA*

June 2018 - Present

Autonomous Vehicle Researcher

- Incorporated autonomous navigation abilities into a confidential multinational tractor-trailer company's loader vehicles using NumPy/Python, saving up to ~ 80% of man-hours dedicated to operating the vehicle.
- Closed a path-following control loop to ensure accurate vehicle motion along a pre-defined path within a 0.5m horizontal error tolerance.
- Implemented a smoothed RRT path-planning algorithm that prevents collisions and preserves efficiency.
- Processed camera data using OpenCV to detect and avoid obstacles.

PROJECTS

Autonomous Ocean Robot – *Claremont, CA*

April 2019 - May 2019

- Built an autonomous ocean robot to determine the wind-current relationship near shore.
- Implemented PD control to have robot navigate autonomously to different waypoints and hold its position within a 1m radius of a waypoint while gathering data in turbulent conditions.
- Designed sensor mounts that could rotate to track the heading of a weather vane using Python and Arduino.

Autonomous Vehicle Competition – *Claremont, CA*

September 2017 - November 2017

- Designed, programmed and constructed two autonomous robots to play Capture the Flag using Arduino.
- Placed second out of over twenty teams.

LEADERSHIP

Committee for Activities Planning – *Harvey Mudd College*

April 2018 - Present

Director

- Organize off-campus activities for students within our \$30,000 USD annual budget constraint.
- Increased the number of students going off-campus by over 110% within a year.

Society of Women Engineers – *Harvey Mudd College*

April 2018 - Present

Faculty Liaison and Event Coordinator

- Plan an annual conference that brings 80+ high school girls to campus to learn about science and engineering.
- Organize around 25 events every year for companies looking to recruit from our club.

SKILLS

Programming Languages

Python, C++, Go, C, Java.

Tools

MATLAB, Git, AutoCAD, SolidWorks.

Native Languages

English, Cantonese, Mandarin.

Other Languages

French (fluent).