DAPHNE POON

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EDUCATION

Harvey Mudd College – *Claremont, CA* Expected Graduation: May 2021
Bachelor of Science in Computer Science and Math – Dean's List *3.82 GPA*

- Hong Kong Scholarship for Excellence awardee ($> \$30,000$ USD per year).
- **Relevant coursework:** Autonomous Vehicles, Computability and Logic, Algorithms and Data Structures, Scalable Systems, Combinatorial Optimization, Advanced Algorithms (Fall '20), Systems Simulation (Fall '20).

WORK EXPERIENCE

Lyft Level 5 – *Palo Alto, CA* June 2020 - July 2020
Software Engineer Intern – Compute Infrastructure

- Designed and wrote a Kubernetes deployment controller in Go that adjusts replica counts and limits job scheduling, allowing systems upgrades and maintenance to avoid choking resources.
- Implemented and onboarded all Compute Infrastructure engineers onto a Python-based CLI, which interacts with the controller's REST API to allow quick deployment scaling.
- Reduced the time needed to scale Kubernetes deployments from 3 minutes to a matter of seconds.

Dropbox – *San Francisco, CA* May 2019 - August 2019
Software Engineer Intern – Search Infrastructure

- Built backend functionality in Go that allows users to filter by co-workers' most recently edited files, something an estimated 10% of Dropbox Business searches previously attempted and failed to do.
- Parallelized an HBase backfill over 1000 nodes using an internal Hadoop MapReduce analog, to make processing a trillion file edits tractable.

Lab for Autonomous and Intelligent Robotics – *Claremont, CA* June 2018 - December 2019
Research Intern

- Integrated realtime (200ms latency) autonomous navigation capabilities into a tractor-trailer company's loader vehicles as part of a 2-person team.
- Developed a model predictive controller in Python that enabled autonomous waypoint navigation, using RRT (a continuous variant of breadth-first search) for the planning phase.
- Integrated obstacle detection for the planning algorithm with OpenCV and an onboard camera interface.
- Designed, printed, and installed 3D-printed mounts for the camera, GPS and IMU sensors.

LEADERSHIP AND PROJECTS

Committee for Activities Planning – *Harvey Mudd College* April 2018 - April 2020
Director

- Organized off-campus activities for students within our $\$30,000$ USD annual budget during my two-year term.
- Increased the number of students going off-campus by over 110% within a year by subsidizing a larger variety of events and making events more accessible with additional transportation options.

Autonomous Ocean Robot – *Claremont, CA* April 2019 - May 2019

- Built an autonomous ocean robot to determine the wind-current relationship near shore
- Implemented a PD controller and sensor readers in Python and C to maintain position within 1m.

SKILLS

Programming Languages Python, Golang (Go), C++, Java.
Native Languages English, Cantonese, Mandarin.