DAPHNE POON

dpoon@hmc.edu – (909) 267 8225 – daphnepoon.com

EDUCATION

Harvey Mudd College – *Claremont, CA* May 2021
Bachelor of Science in Computer Science and Math – with High Distinction *3.86 GPA*

· **Relevant coursework:** Autonomous Vehicles, Computability and Logic, Algorithms and Data Structures, Scalable Systems, Combinatorial Optimization, State Estimation, Motion Planning.

WORK EXPERIENCE

Pure Storage – *Remote* August 2020 - May 2021
Software Engineer on Clinic Project

· Built a customer-facing CLI in Go that allowed users to easily manage flash array storage within AWS.
· Automated an error-prone and repetitive manual deployment process, and ensured scalability with Kubernetes.

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 be performed smoothly.
· 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
Researcher

· Integrated realtime (200ms latency) autonomous navigation capabilities into a Bobcat T650 track loader 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

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.

SKILLS

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