MICHAEL LEONG

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EDUCATION

University of Southern California *Expected May 2028*
B.S. Computer Engineering & Computer Science *Los Angeles, CA*

EXPERIENCE

Lawrence Berkeley National Laboratory July 2023 - Present
Research Intern *Berkeley, CA*

· Developed a web-based tool for assessing the building energy demand flexibility of small and medium-sized businesses.
· Set-up MongoDB, Express, React, Node (MERN) web stack and GitHub Actions automated tests.
· Ported existing building data to MongoDB and implemented REST API to communicate between server and client.
· Implemented and optimized existing demand flexibility algorithms to the application.

FRC 604 Quixilver Robotics June 2020 - May 2024
VP of Engineering *San Jose, CA*

· Lead team in all branches of technical robot design. Responsible for training new members and contributing to robot development.
· Developed time-optimal trajectory optimization software utilizing non-linear optimization algorithms using our robot's kinodynamic constraints.
· Developed particle filter robot localization software using both odometry and computer vision utilizing PhotonVision/OpenCV to detect AprilTag targets.

PROJECTS

VelocityDraft
GitHub Link: https://github.com/shuklabhay/VelocityDraft

· Created college essay writing scheduler based on writing speed, deadline, and number of necessary revisions. Created with Firebase, Express, React, Node (FERN) web stack.
· Received 3rd place submission while competing against 120+ people.

Canvas Final Grade Calculator
GitHub Link: https://github.com/leongmichael/CanvasFinalGradeCalculator

· Web extension that automatically fetches Canvas class grade and calculates the required score on your final exam to receive your desired grade.
· 100+ users, 5.0 stars on Chrome Web Store.

SKILLS

Programming Languages	Java, JavaScript, Python, TypeScript
Libraries + Frameworks	Flask, Firebase, MongoDB, Express, React, Node, React-Native, Expo, Matplotlib, Numpy
Tools	Git, Onshape, Fusion360, Photoshop, Vegas Pro

HONORS & AWARDS

- SVEC Education Scholarship Honorable Mention — 2024
- California Seal of Biliteracy for Chinese — 2024
- FIRST Dean's List Semi-Finalist — 2023
- OneHacks III 3rd place submission — 2023