

MICHAEL LEONG

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EDUCATION

University of Southern California

B.S. Computer Engineering & Computer Science

Expected May 2028

Los Angeles, CA

EXPERIENCE

Lawrence Berkeley National Laboratory

Student Assistant

June 2023 - Present

Berkeley, CA

- Led development of EVIT (Electric Vehicle Infrastructure Tool): open-source web application that can estimate the requirements for charging infrastructure and the related electrical demands.
- Set-up Express, React, Node webstack and GitHub Actions automated tests.
- Implemented REST API to communicate between client and computational Python backend scripts.
- Skills: React.js, Node.js, Express.js, REST API, NumPy, Pandas, GitHub Actions

FRC 604 Quixilver Robotics

VP of Engineering

September 2021 - June 2024

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/shuklabbay/velocity-draft>

- 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/canvas-final-grade-calculator>

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

SKILLS

Programming Languages

C++, Java, JavaScript, Python, TypeScript

Libraries + Frameworks

Flask, Firebase, MongoDB, Express, React, Node, Matplotlib, Numpy, Pandas, SQL, TensorFlow

Tools

Git, GitHub Actions, Onshape, Fusion360

HONORS & AWARDS

- | | |
|---|------|
| • California Seal of Biliteracy for Chinese | 2024 |
| • FIRST Dean's List Semi-Finalist | 2023 |
| • OneHacks III 3rd place submission | 2023 |