

# 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 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**  
**Libraries + Frameworks**  
**Tools**

C++, Java, JavaScript, Python, TypeScript  
Flask, Firebase, MongoDB, Express, React, Node, Matplotlib, Numpy, Pandas, SQL, TensorFlow  
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