

# HaiDang Nguyen

Davis, CA 95616 | [haidangnguyen1061@gmail.com](mailto:haidangnguyen1061@gmail.com) | +1 (714) 215-5124 | [GitHub](#) | [LinkedIn](#)

## TECHNICAL SKILLS

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**Languages:** Rust, C, C++, Python, Ruby, SQL, Javascript, HTML, CSS, MATLAB

**Web Frameworks and Libraries:** Express, Ruby on Rails, React, Svelte

**Databases:** PostgreSQL, MongoDB, Redis, Firebase

**Cloud Computing Platforms:** AWS, Google Cloud Platform

**Relevant Knowledge & Course Work:** Programming & Problem Solving(C), Object Oriented Programming(C++), TCP/IP & Networking Concepts

## EXPERIENCE

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### Software Developer

Oct. 2023 – June 2024

*EcoCAR Competition Club*

*Davis, CA*

- Built C++ software for the Cadillac Lyriq to create accurate estimates for vehicle location, and process sensor data to detect leading cars on straight roads and curved road sections.
- Created MATLAB programs to process and visualize data from CAN signals.
- Worked in small and large teams on testing initiatives and fulfilled deliverables by the EcoCAR competition.

### Flight Software Engineer

Oct. 2023 – June 2024

*Space & Satellite Systems Club*

*Davis, CA*

- Built C software that uses QSPI protocols in conjunction with the NOR Flash to store and process experiment data for the satellite systems.
- Implemented CMake build system for the satellites code, mitigating the need for STM32CubeIDE and its build processes.

### Software Engineer Intern

July 2022 – Sept. 2022

*Wefunder*

*San Francisco, CA*

- Implemented UI features that improved user experience for 1M+ users visiting the pages of companies that they had already invested in.
- Utilized Redis to reduce latency of data delivery in response to high-frequency data fetches from internal admin tools.
- Built admin tools in React with TypeScript to facilitate internal book-keeping for incoming and outgoing funds to escrow accounts.
- Wrote optimized SQL queries to improve performance on user investment profiles.

## PROJECTS

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### High Performance Trading | *Rust, Websockets, Redis, SQL, Parquet, Git*

2025

- Designed and implemented a performance-critical software system used for performing high frequency trades at low latency written in Rust.
- Utilized websockets for market data streaming and low latency trading.
- Implemented a cache running on a dedicated thread for fast data retrieval and storage needs.
- Implemented parquet files functionalities for performant IO operations and fast querying needs.
- Includes Redis data storage functionalities, giving flexibility to users.

### Doksum | *ExpressJS, Svelte, Firebase, OpenAI, Git*

2023

- Developed full stack web application that provides pdf summaries functionality.
- Solved the problem of tokens limit in ChatGPT responses.
- Implemented the Firebase, OpenAI, ExpressJS, and Svelte web development stack.

### Blockchain | *ExpressJS, Javascript, Git*

2021

- Implemented a blockchain written in Javascript.

## EDUCATION

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### University of California Davis

Davis, CA

*Bachelor of Science in Computer Science, Minor in Mathematics*

*June 2027*