

Jiahong Long

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Skills & Technologies

- Personal & academic experience with `git`, `go`, `latex`, `bash/zsh`, `matlab`, `c++`, `c`, `python`, and `rust`
- Production experience with `react`, `redux`, `spring`, `AWS`, and `java/intellij`
- Skilled with `pandas`, `scikit-learn`, `numpy`, `scipy`, and `pytorch` data processing libraries
- Experience with building userspace applications for Linux and POSIX environments
- Uses a `arch/i3` ricer environment on a day-to-day basis with custom `vim/emacs` configuration
- Exposure to `x86` and `arm` assembly, `sqlite`, `SDL` and `Nvidia cuda`

Education & Coursework

University of California, San Diego / B.S. Computer Engineering @ Jacobs School of Engineering, B.S. Applied Mathematics, **GPA 3.9** with honors

September 2019 - June 2023 (projected), La Jolla, CA

- Differential Equations, Numerical Linear Algebra, Vector Calculus, Signals Processing, Statistics
- Computer Architecture & Programming, Advanced Data Structures, Discrete Mathematics & Computability Theory, Algorithm Design & Analysis

Experience & Projects

Personal projects @ github.com/j1ah0ng, leetcode.com/j1ah0ng

September 2018 - present

- Contributing to github.com/polybar/polybar to add functionality to the Linux desktop environment for recognising and displaying the status of network interfaces brought up on-the-fly (`c++`, `sh`)
- Contributing to github.com/nix-rust/nix to implement `rust` FFI bindings to syscalls such as `eventfd`
- Bringing up a `rust`-based robotics RTOS at github.com/m3rcuriel/hyperion
- Implementing `libc/string.h` functions in `x86` assembly at github.com/achierius/aolc

Cruise Automation / Software Engineering Intern

June 2022 - August 2022, San Francisco, CA

- Work in progress

Bolt Financial / Software Engineering Intern

January 2022 - June 2022, San Francisco, CA

- Work in progress on a `golang`, `gorm`, and `react-typescript` stack

Amazon / Software Development Engineering Intern, Alexa Smart Properties

June 2021 - September 2021, Seattle, WA

- Built and documented a production customer-facing portal for management of enterprise SaaS products on a `react`, `spring`, and `AWS` based internal software stack
- Wrote high-coverage unit and end-to-end functionality testing of production-deployed code
- Implemented a modular `react`-based portal which was integrated into an existing codebase
- Wrote multiple REST API endpoints to hydrate the frontend portal which integrated with existing internal services in addition to new `AWS` resources spawned using Cloudformation

UC San Diego Jacobs School of Engineering / Instructional Assistant

December 2020 - March 2021, La Jolla, CA

- Developed and held review sessions for discrete mathematics, to introduce students to formal and rigorous mathematical methods

Valkyrie Robotics / STEM mentor, Student Instructor, Director of Media

October 2017 - present, Cupertino, CA

- Performed statistical analysis on the consistency and accuracy of CNC machinery using simple *t*-tests
- Developed and taught a one-week summer camp curriculum to introduce middle school students to robotics and the engineering process