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

University of California, Berkeley / 2020 Summer Sessions

- Data science and computation, statistical inference, data-driven system modeling (DATA 100)

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`

Bolt Financial / Software Engineering Intern
January 2022 - April 2022, San Francisco, CA

- Work in progress.

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