

Jiahong Long

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Skills & Technologies

- Extensive personal and academic experience with git, 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

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

Triton Unmanned Aerial Systems / Path Planning Automation Engineer

September 2019 - March 2020, UC San Diego

- Worked on implementing a dynamically responsive path-planning suite for unmanned autonomous aircraft using modern APIs such as zmq, on a rust and python-based FFI

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