

Apollo Jain

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Technical Skills

Languages: Python, Matlab, Java, C++, C, Go, NodeJS, Typescript

Technologies: CVXPy, OpenCV, ROS, Docker, ZeroMQ, Arduino, NextJS, GraphQL, Hasura

Professional Experience

Kaizen Labs

New York, NY

Founding Engineer & Engineering Lead

February 2023 – Present

- Architected and built out backend for Kaizen's Flagship Recreation Management System (RMS) for Facility Reservations, including data model, unit tests, and business logic (NextJS, React, NodeJS, GraphQL, Hasura, PostgreSQL).
- Architected and built out backend and data model for Kaizen's Special Events Permitting Software.
- Worked on other platform and front-end features as needed, including email, logging, feature flag, and data ingestion infrastructure (NextJS, React, NodeJS, GraphQL, Hasura, PostgreSQL).
- Eventually led a team of 5 to work on various aspects of the Kaizen RMS, including memberships, programs, and more. This involved hands-on-keyboard work, as well as things like 1:1s, checklists, technical documentation, code review process, and more.
- Took on other roles that were necessary for the company, including performing Technical Project Management, engaging with customers as a de-facto Account Executive, and creating the company's technical interview process.

Systems & Technology Research

Arlington, VA

Scientist & Team Lead

February 2021 – February 2023

- Led a team of 4 to develop a system to catch rogue IMSI catchers in the 3G and 4G domains to help aid with tracking avoidance of USG officials. Awarded the **STR Spotlight Award** for my technical contributions. Technologies used included Flask, SQLite, Javascript, HTML, CSS, and Fast API.
- Worked on a Space-based AMTI/GMTI Radar, primarily on the beam planner and command-and-control interface (MATLAB, Python, C++)
- Conducted Program Management and 6-DOF Simulation Development for DARPA Nautilus, a program that aims to build AI that can design all aspects of an unmanned underwater vehicle (UUV), including navigation, energy, and 3D model constraints verification (ROS, C++, Python)
- Worked on an RL Simulation Environment for a Maritime System of Systems (Python3, Open API Gym, Ray)
- Led teams of up to 6 on projects related to geospatial pattern-of-life (Java, Javascript, HTML, CSS, PostgreSQL) and rogue sensor detection, but they are classified.

Anduril Industries

Irvine, CA

Software Engineer

November 2018 – October 2020

- Built out the company's maritime tower product, which includes radar and VHF transceiver serial processing code, general infrastructure, a boat-specific sensor fusion tracking model, and a sigmoid-based hostile boat classifier. Currently used in the field for drug trafficking prevention on the California coast. Written in C++, Golang, and NixOS.
- Built out radar integrations, tracking models, and software infrastructure for the company's drone tracking tower. Integrated various third-party RF Detection Sensors in order to improve the algorithm's confidence. Written in C++, Golang, and NixOS. Deployed both domestically and internationally.
- Created an EKF-based general purpose model for fusing high-confidence measurements (ADSB, AIS, GPS) into the system's global tracker. Prototyped in Matlab and written in C++.

Education

UC Berkeley

M.S. EECS

May 2018

GPA: 3.9

Teaching: Designing Information Devices and Systems II (Circuits, Controls, and Signal Processing)

Thesis: EV Infrastructure Planning and Grid Impact Assessment: A Case for Mexico

UC Berkeley

B.S. EECS

May 2017

GPA: 3.6

Organizations: ASUC Student Government (CTO), Robotics at Berkeley (Co-Founder, Vice President), Hackers at Berkeley (Director), Kairos Society

Awards: Cal Alumni Association Leadership Award, Oski Student Leadership Award, Fung Fellowship for Wellness and Technology