Aaryan Agrawal

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EDUCATION

University of California, San Diego La Jolla, CA

Bachelor of Science in Data Science Sep. 2021 – Jun 2025

- GPA: 3.91/4.0
- Coursework: Data Structures & Algorithms, Statistics, Discrete Math, Databases, Distributed Systems, Data Visualization, Machine Learning, Deep Learning, Natural Language Processing, Computer Vision, Compilers

EXPERIENCE

Amazon June 2024 – Sept. 2024

Software Development Engineer Intern Seattle, WA

- Designed smart ticket enricher from ground up to automatically retreive and post AWS CloudWatch alarm logs, configurable queries, and AWS Bedrock LLM-powered analysis onto tickets saving 10 minutes per ticket
- Ingested events from AWS EventBridge into AWS SQS queue, AWS Lambda with automatic retries

Amazon June 2023 – Sept. 2023

Software Development Engineer Intern Seattle, WA

- Architected and implemented feature enabling multiport Virtual IP support for AWS load balancer migration tool
- Modified every tool component to support over 4000 new customers, automating40 years of manual dev work
- Leveraged AWS Lambda, Step Functions, DynamoDB, S3 for scalable serverless backend, React for frontend

Sift July 2022 – Sept. 2022

Software Engineering Intern San Francisco, CA

- Built end-to-end data pipeline with Kafka, Flink, and BigTable to create realtime ML features for fraud prevention
- Created dataset and analyzed IP to Geo mapping correctness, determined vendor with best possible accuracy
- Improved JUnit testing suite using embedded tools for full integration tests, reaching package code coverage of 95%

Lockheed Martin Solar and Astrophysics Lab Sept. 2020 – July 2021

IRIS Data Analyst Palo Alto, CA

- Developed Python sunspot clustering algorithm to group and simplify over 500k data points into 256 groups
- Generated comprehensive dataset of sun emission spectra to improve understanding of sunspot behavior
- Published paper in The Astrophysics Journal as second author releasing full dataset for scientific research

EXTRACURRICULARS

Yonder Dynamics Sept. 2021 – Present

Software Lead La Jolla, CA

- Grew software team from 5 to over 15 members, fostered inclusive and diverse environment with collaboration
- Taught workshops on ROS programming, planned quarterly team goals, integrated CI/CD Agile workflow
- Placed 5th worldwide out of 102 teams competing in the international University Rover Competition
- Simulated obstacle avoidance algorithm using stereo cameras with ROS Gazebo, earned max points in competition
- Trained and optimized YOLO neural network for long-range object detection, achieved over 90% accuracy

PROJECTS

UCSD Makerspace Check-In | *Python, Tkinter, Figma, Google Sheets* Winter 2023

- Designed central check-in system for all UCSD Makerspaces serving 5000+ students with 8000+ monthly logins
- Worked closely with designers to seamlessly translate Figma mockups into functional Python Tkinter GUI
- Developed fault-tolerant desktop application with full Google Sheets and UCSD API integration

Keycap Price Tracker (https://gmk.aaryan.dev/) | *Python, Firebase, React* Summer 2022

- Scraped and parsed GMK keycap aftermarket prices from over 10000 Reddit posts and stored data in Firebase
- Built fully interactive React website with fuzzy searching to dynamically show product prices and trends over time

TECHNICAL SKILLS

Languages: Python, Java, C++, HTML/CSS, JavaScript, R, Rust, SQL, NoSQL
Tools: Git, AWS, GCP, Node.js, React, Svelte, Firebase, Kafka, Flink, Spark, Linux, Docker, ROS, LLM, GenAI
Libraries: pandas, Matplotlib, OpenCV, scikit-learn, TensorFlow, PyTorch, Keras, NLTK