Aaryan Agrawal

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EDUCATION

University of California, San Diego | B.S. in Data Science   Expected Graduation June 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

WORK EXPERIENCE

Amazon   June 2024 – September 2024
Software Development Engineer Intern | Seattle, WA
- Developing smart ticket bot integrated with AWS CloudWatch, AWS Bedrock for LLM-based RCA predictions

                                                                 June 2023 – September 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, automating 40 years of manual dev work
- Leveraged AWS Lambda, Step Functions, DynamoDB, S3 for scalable serverless backend, React for frontend

Sift   July 2022 – September 2022
Software Engineering Intern | San Francisco, CA
- Built end-to-end data pipeline with Kafka, Flink, and BigTable to create real-time 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   September 2020 – July 2021
IRIS Data Analyst | Palo Alto, CA
- Developed Python sunspot clustering algorithm to group and simplify over 500k unique 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   September 2021 – Present
Software Lead | La Jolla, CA
- Grew software team to over 15 members, fostered inclusive and diverse environment with cross-team 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   Winter 2023
- Designed central check-in system for all UCSD Makerspaces serving 4000+ students with 8000+ monthly logins
- Developed fault-tolerant desktop application and GUI in Python with full Google Sheets and UCSD API integration

Keycap Price Tracker (https://gmk.aaryan.dev/)   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

SKILLS

Languages: Python, Java, C++, HTML/CSS, JavaScript, R, Rust, SQL, NoSQL

Tools: Git, AWS, GCP, Node.js, React, Svelte, Firebase, Kafka, Flink, Hadoop, Spark, Linux, Docker, ROS, LLM, GenAI

Libraries: pandas, Matplotlib, OpenCV, scikit-learn, TensorFlow, PyTorch, Keras, NLTK