Aaryan Agrawal

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Work Experience

Lockheed Martin Solar & Astrophysics Laboratory, Palo Alto, CA IRIS Data Analyst

September 2020 - July 2021

INIS Duta Allalyst

- Worked with data from the Interface Region Imaging Spectrograph (IRIS) satellite
- Developed algorithm for masking sunspot regions and clustering them
- Generated comprehensive dataset of sunspot atmospheres and magnetic fields

Castlight Health, San Francisco, CA

Engineering Intern

Summer 2020

- Used topic modeling (LDA) to group and understand comments from user surveys
- Identified common complaint (30% of responses) that was easily solvable
- Analyzed and graphed user search database to find trends and improve results

Engineering Intern

Summer 2019

- Used open-source tools to generate relational diagrams of databases; provided web interface that any engineer could access
- Implemented Python tooling to automatically fetch and graph monitoring routines

Projects

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

Summer 2021

- Scraped GMK keycap aftermarket prices from Reddit posts and uploaded data to Firebase
- Built React website to dynamically show product prices over time

Labyrinth Escape (https://maze.aaryan.dev)

Summer 2020

- Created peer-to-peer online multiplayer game where players attempt to escape a maze while being hunted by another player
- Used PeerJS for communication and p5.js for game drawing

Education

University of California, San Diego

Expected Graduation June 2025

B.S. in Computer Science

Expected Coursework

Introductory Computer Science, Data Structures & Algorithms

Multivariable Calculus, Linear Algebra

Gunn High School, Palo Alto, CA

August 2017 – June 2021

Unweighted GPA: 4.0; Weighted GPA: 4.4

Relevant

AP Computer Science A, AP Calculus BC

Coursework Engineering Technology

Extracurricular Activities

Gunn Robotics Team

Fall 2019 – June 2021

Controls Subgroup

- Spearheaded computer vision initiative, created entire OpenCV processing pipeline
- Trained convolution neural network to track balls on field and autonomously move to them
- Prepared and delivered electronics lessons to new members

Gunn Cryptology Club

Fall 2019 - June 2021

Vice President

- Co-organized and publicized <u>Great Cipher Challenge</u>, a national cryptology competition
- Developed website and backend, including scoring system and leaderboard

Skills

- Python, Java, JavaScript, SQL
- Data analysis, web scraping, machine learning, neural networks
- NumPy, Pandas, Matplotlib, OpenCV, scikit-learn, Gensim, Git, Linux