

Adrian Wong

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Education

University of California, San Diego

B.S. Mathematics-Computer Science

Sept 2021 - Jun 2025

San Diego, CA

Relevant coursework: Advanced Data Structures, Advanced Algorithms, Big Data Analytics, Computer Systems, Graph Theory, Abstract Algebra, Linear Programming, Numerical Optimization, Mathematical Cryptography

Projects

Vehicle Maintenance Management System

Jun 2024 – Aug 2024

JavaScript, React.js, Node.js, HTML, CSS

San Diego, CA

- Designed a full-stack vehicle maintenance tracking system using React.js, HTML, Node.js, JavaScript, enabling CRUD operations for 100+ maintenance records across 20+ clients and deployed through AWS
- Created model schemas from the NHTSA Vehicle API to auto-populate vehicle specifications, reducing manual data entry by 70%
- Developed a responsive frontend with DOM manipulation and Bootstrap for UI components, improving user experience through cross-device compatibility

Super Bowl Halftime Show Regression

Apr 2024 – Jun 2024

Python, Pandas, NumPy, Matplotlib, Seaborn, Jupyter Notebook

San Diego, CA

- Trained linear regression models in Python to analyze correlations between artist popularity, ad exposure, and financial performance, achieving 90% accuracy in stock price predictions
- Performed exploratory data analysis (EDA) on 100,000+ rows of Super Bowl Halftime Show data, revealing a 70% correlation between the popularity of performers and advertiser stock prices
- Leveraged Pandas, NumPy, Seaborn, and Matplotlib, to create statistical visualizations of key variables to evaluate model performance
- Led a team of 5 engineers using an agile workflow, distributing tasks such as data collection, hypothesis formulation, analysis, and revisions to ensure timely delivery

PantryPal: Meal Planner

Sept 2023 – Dec 2023

Java, MongoDB

San Diego, CA

- Developed a full-stack JavaFX GUI application supported by a noSQL database using MongoDB
- Integrated with OpenAI's ChatGPT-4o and Whisper APIs to generate food recipes from transcribed audio input, enabling hands-free meal planning with 90% accuracy from voice input to generated output
- Wrote 100+ unit and integration tests, resulting in catching and fixing of 40+ bugs prior to deployment to production, reducing system downtime by 30%
- Enhanced DALL-E food image generation accuracy by 85% using KeyBERT embeddings for keyword extraction, leading to more relevant and visually accurate results

CodePath Cybersecurity

Apr 2023 – Jun 2023

Linux, John the Ripper, Metasploit, Bash

San Diego, CA

- Analyzed system vulnerabilities by deploying EICAR virus payloads on exploited ports of a Linux virtual machine, leading to the fix of 4 critical security weaknesses by switching to secure ports and SSH keys
- Cracked 1000+ leaked passwords by manipulating John the Ripper rulesets, enhancing discovery speed by 25%
- Detected and mitigated trojan horses by cross-referencing IP addresses against the National Vulnerability Database, reducing potential system compromise by 30%

Technical Skills

Languages: Python, Java, C++, C, HTML, CSS, JavaScript, Bash, SQL

Frameworks: Pandas, NumPy, Seaborn, Matplotlib, Scikit-Learn, Jupyter, MongoDB, Git, JUnit, React, Astro

Tools/Workflow: Unix/Linux, GitHub, CI/CD, Docker