Aditya Paluri

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EDUCATION

University of California, Riverside **Graduation Year: 2025**
BS, Computer Science and Engineering *Riverside, CA*

- 3.6/4.0 GPA

SKILLS

- **Languages:** C++, Python, Java, Javascript, HTML, CSS, SQL
- **Frameworks and Libraries:** Flask, OpenAI, Hugging Face Transformers, Pandas, Scikit-learn, OpenCV, Pytesseract, PyQt5, Node.js
- **Cloud and DevOps:** AWS (EC2, RDS, Textract), Docker, API integration, PostgreSQL, Firebase, Git
- **Relevant Coursework:** Data Structures and Algorithms, Software Methodologies/Construction, C++ Programming I & II

WORK EXPERIENCE

VVDN Tech. Remote
Software Engineering Intern Jul 2023 - Sep 2023

- Leveraged an AWS t2.medium instance to set up an Ubuntu testing environment, incorporating Docker for efficient service deployment and collaborating with senior team members to debug intricate C++ code in proprietary services, using Makefiles for efficient build automation.
- Contributed to substantial software quality enhancements, improving run-time efficiency by 7%, by meticulously reporting bugs and implementing strategic optimization measures, improving performance.

PROJECTS

CMD-F++ - Developed with Javascript, HTML, CSS, OpenAI

- Developed an AI-powered Chrome extension that enhances the traditional "Command-F" feature, allowing users to input general queries, rather than specific keywords, and retrieve aggregated, contextually relevant information using OpenAI, saving time by avoiding manual searches through multiple keyword mentions.
- Integrated BlobAPI to enable efficient downloading of aggregated data from multiple sources, streamlining the user experience for extensive web research and boosting data collection efficiency by 47%.

Complaint Coordinator - Developed with Python, Flask, AWS RDS, Google Cloud API's, OpenAI

- Developed a full-stack AI-driven website to analyze and categorize multi-format complaints—video, voice, image, and text—using Google Cloud APIs, GPT-4 for data extraction, and TextBlob for sentiment analysis.
- Designed and deployed a PostgreSQL database on AWS RDS, securely managing user-specific data with efficient category-based storage with an efficient 92% categorization accuracy and visualizing data through Plotly graphs.
- Integrated user authentication and comprehensive report generation, with the website deployed on AWS EC2.

AutoForecast - Developed using Python, Scikit-learn (Random Forest), Pandas

- Trained and fine-tuned a Random Forest regression model, leveraging Pandas for data preprocessing, to predict used car prices based on features like engine size and mileage, achieving an R^2 value of 0.9553 and a MAPE of just 0.13%.
- Deployed the model in a Docker container, and exposed predictions via a REST API for scalable, cloud-based access.

ClaritiNote (Group Project) - Developed in Python using Flask, AWS Textract, OpenCV, and OpenAI

- Developed a tool to extract text from handwritten and printed PDFs using AWS Textract for OCR and summarize it using the OpenAI API, with a simple Flask interface for user input.
- Implemented a custom pre-OCR pipeline using OpenCV to enhance image quality through denoising, sharpening, and binarization, improving text extraction accuracy by 37%.

Blackdeck - Developed in Python using PyQt5

- Developed a variation of the "Blackjack" game using object-oriented design and PyQt5 for an intuitive user interface.