

David Gaspar-Herrera

david.gaspar1225@gmail.com | 832-576-2876 | www.linkedin.com/in/ddg-h | github.com/David-Gaspar-H

Education

University of Houston, Houston, TX, United States

Bachelor of Science, Computer Science

Expected May 2025

Work Experience

Software Engineering Intern, Hewlett Packard Enterprise

June 2024 - Present

- **Developed a Full Stack Web Application:** Created a server management tool designed to monitor and protect lab infrastructure, using Flask for the backend and React for the frontend.
- **Implemented Modular Architecture:** Utilized Docker containers to ensure the scalability and maintainability of the application, with separate modules for monitoring, shutdown, and data management services.
- **Event-Driven Automation:** Implemented logic to trigger automatic shutdowns of lab operations when certain thresholds are reached, ensuring protection against environmental hazards.
- **Collaborative Development:** Actively updated project progress on GitHub, and presented updates to end users, ensuring clear communication and continuous feedback.
- **Technical Documentation:** Contributed to comprehensive system documentation in Confluence, detailing the architecture, implementation, and usage of the application for future reference and onboarding.

Software Engineering QA Intern, Hewlett Packard Enterprise

May 2023 – Dec 2023

- **Automated Testing:** Spearheaded the creation of automated End-to-End Tests using Playwright and Python, significantly enhancing the reliability and functionality of the server management platform.
- **Problem Resolution and CI/CD:** Managed and resolved recurring production issues by seamlessly integrating changes through CI/CD pipelines, utilizing Jira for task management.
- **Machine Learning Integration:** Developed Python-based automated log analysis and classification systems, applying machine learning techniques to identify log events in failing test cases, thereby improving troubleshooting efficiency.

Web Developer, Institute of Electrical and Electronics Engineers – University of Houston

Aug 2021 – May 2022

- **Website Management:** Maintained and enhanced the organization's website, ensuring dynamic and engaging communication of club activities.

Project experience

Natural Language Opinion Search Engine

Aug 2024 - Present

- Developed an advanced search engine to retrieve relevant product reviews from a large Amazon dataset based on aspect-opinion queries
- Implemented multiple NLP techniques including Boolean retrieval, sentiment analysis, and machine learning classifiers (SVM, Naive Bayes) to improve search relevance

Pixl-Sketch

July 2022 - Sep 2022

- Collaborative art platform enabling artists to create and collaborate on art projects.
- Utilized tools including React, Node.js, Socket.io, and MongoDB.

Skills

- **Programming Languages:** C++, Python, MATLAB, Javascript, HTML, CSS, SQL, Kotlin, SQL, C, Java
- **Tools/frameworks:** MATLAB, Github, Git, Excel, Word, Humio, Playwright, Docker, React, Flask, MongoDB, Android Studio, Jira, CICD, Confluence, Nginx, Unicorn, Django, postgresql
- **Languages:** Bilingual in English and Spanish.