Jose Pantoja Morales

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EDUCATION

University of California, Irvine March 2025
B.S. Computer Science
Specialization in Artificial Intelligence & Information
GPA: 3.6

TECHNICAL SKILLS

Programming Languages: C, C++, Java, Python, HTML, CSS, JavaScript, SQL, x86 Assembly, Shell Scripting, TypeScript

Relative Coursework: Front-end, Back-end, Full-stack, API, Embedded systems, Database Management, AI & Machine Learning, Cloud Computing, Data Structures, Object-Oriented Programming, Search Engine Architecture

Software/Frameworks: Office 365, Git, Gitlab, MySQL, AWS, Firebase Cloud, Docker, React

PROJECTS

Fabflix Tools: *Java, JavaScript, React, HTML/CSS, AWS, MySQL, Docker, Kubernetes, JMeter* Jan 2025 – Present
- Engineered a high-performance movie e-commerce platform, enabling seamless browsing, searching, and purchasing of movies with a responsive UI.
- Architected and deployed a scalable cloud infrastructure on AWS, leveraging Docker and Kubernetes for containerization and orchestration.
- Enhanced search efficiency with Full-Text Search, Autocomplete, and Fuzzy Search, delivering real-time, intelligent search capabilities.
- Optimized database performance by implementing Prepared Statements, Stored Procedures, and XML Parsing, reducing query execution time.
- Strengthened security and reliability by enforcing HTTPS, reCAPTCHA, cookies, and master-slave database replication for load balancing.
- Conducted large-scale performance testing with JMeter, identifying bottlenecks and optimizing system throughput for peak traffic loads.

ZotSearch Tools: *Python, Page Rank, Similarity Cosine, Web Scrapper, React, HTML/CSS* Sep 2024 – Dec 2024
- Led a team of four to develop a custom search engine, indexing university websites through advanced web scraping and data processing in Python.
- Designed and implemented a ranking algorithm leveraging PageRank and cosine similarity, delivering highly accurate and context-aware search results.
- Optimized data pipelines and query handling, reducing search latency from seconds to milliseconds across thousands of indexed pages.
- Developed an intuitive React-based user interface, enhancing accessibility and usability for students and faculty.
- Managed project scope, delegated tasks, and ensured timely delivery, fostering collaboration and technical excellence within the team.

Health App Tools: *Kotlin, Firebase Cloud, Web Scraping, React, Pytorch* Jan 2024 – Mar 2025
- Collaborated on Development of a mobile application that delivers AI-powered personalized food recommendations, adapting to user dietary preferences, allergies, and health goals.
- Engineered a responsive React-based UI, ensuring an intuitive and seamless user experience across devices.
- Optimized Firebase cloud storage and real-time database solutions, enabling efficient handling, synchronization, and updating of user preferences.
- Integrated machine learning algorithms using PyTorch, leveraging collected data to enhance recommendation accuracy and predictive capabilities.

AirPort DB Tools: *Python, Tkinter, SQLite, JSON* Dec 2022
- Developed a dynamic airport database management system, leveraging Tkinter for an intuitive graphical interface and efficient data visualization.
- Implemented advanced CRUD operations (search, add, update) for managing continents, countries, and regions, enhancing database functionality.
- Optimized SQL queries to improve data retrieval speed and accuracy, enabling seamless interaction with large datasets.
- Integrated JSON for structured data storage and processing, improving system flexibility and maintainability.