

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: <i>Java, JavaScript, HTML/CSS, AWS, MySQL, Docker, Kubernetes, JMeter</i> | Jan 2025 – Present |
| <ul style="list-style-type: none">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: <i>Python, Page Rank, Similarity Cosine, Web Scraper, HTML/CSS</i> | Sep 2024 – Dec 2024 |
| <ul style="list-style-type: none">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: <i>Kotlin, Firebase Cloud, Web Scraping, React, Pytorch</i> | Jan 2024 – Mar 2025 |
| <ul style="list-style-type: none">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: <i>Python, Tkinter, SQLite, JSON</i> | Dec 2022 |
| <ul style="list-style-type: none">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. | | |