

Rosendo Vasquez II

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Experience

Dell Round Rock, TX
Software Engineer 2 02/2024-Present

- Enabled AI agent access to restricted tax documentation by architecting a RAG-based knowledge library with semantic search capabilities using SingleStore, FastAPI, and Nomic Embed
- Deployed beta conversational agent to users by building an agent with RAG retrieval and MCP tool orchestration, implementing FastAPI endpoints for document upload and management using LangGraph and Python
- Enabled users to dynamically expand agent knowledge base by refactoring Crawl4AI to extract HTML content, scrape and embed documents, and store all content in SingleStore with vector embeddings for RAG retrieval
- Reduced manual document processing by 100+ hours monthly by automating validation and file handling workflows with RESTful API services using FastAPI, Python, and S3 storage

Dell Round Rock, TX
Software Development Intern 05/2023-08/2023

- Achieved 99% reduction in validation time (100+ hours to 3 minutes) by developing automated tax invoicing services with Spring Boot and Spring MVC RESTful APIs
- Increased vendor file validation productivity by 40% by optimizing data storage architecture and query performance using S3 buckets and MySQL database indexing

SPS ARS Aerial Remote Sensing El Paso, TX
Web Developer/Network Operations 10/2021-05/2023

- Enhanced unmanned aircraft tracking system capabilities by developing full-stack features with backend API services and frontend debugging using Quasar, Python, and RESTful APIs
- Achieved NIST MEP cybersecurity self-compliance by leading team audit of company certifications and software architecture against security framework requirements
- Reduced system downtime by automating health monitoring for 50+ company devices through custom Python scripts and REST APIs using Webargs and Flask routing

Skills

Technical Stack: Python, Java, JavaScript, SQL, Bash, PHP, FastAPI, Spring Boot, Flask, ReactJS, Pydantic

Data & Infrastructure: SingleStore, MySQL, MongoDB, S3, Docker, Kubernetes, PCF, CI/CD, Git, JupyterHub

AI/ML: LangGraph, LangChain, Crawl4AI, MCP, RAG Pipelines, Vector Embeddings/Search, Model Evaluations

Core Competencies: Knowledge Graphs, System Design, Data Preprocessing, RESTful APIs

Certificates: Codepath Cybersecurity, Web Development Bootcamp, Machine Learning Specialization

Education

The University of Texas at El Paso El Paso, TX
Bachelor of Science in Computer Science 08/2019-12/2023

Projects

Community Resource Mapping Platform

- Architecting geospatial resource coordination platform enabling proximity-based matching between donors and community organizations (food banks, shelters) using PostGIS spatial indexing and radius-search queries
- Building full-stack POC with ReactJS/Leaflet.js frontend, FastAPI backend, and PostgreSQL/PostGIS database supporting real-time resource visualization and sub-second nearest-neighbor lookups

Knowledge Graph POC with Neo4j

- Architecting knowledge graph system to extract and structure entity relationships from public datasets through data preprocessing pipelines using Python and Neo4j graph database
- Designed graph schema and Cypher query patterns for exploring semantic connections and entity relationships to enhance information retrieval capabilities