Marcus Roldan

marcusaroldan@gmail.com | (973) 229-3445 | marcusaroldan.github.io/project-portfolio |
linkedin.com/in/marcusaroldan
github.com/marcusaroldan

Work Experience

Forward Deployed Software Engineer, Eden, Inc. Jan 2025 – present

- Led the development team through a critical transition period, maintaining product momentum while architecting and implementing end-to-end technical solutions for core MVP features.
- Stepped up as acting technical lead, owning all technical decision-making and system design to balance rapid development with long-term scalability amid resource constraints.
- Directed team execution of strategic technical initiatives, establishing engineering best practices, development frameworks, and infrastructure from the ground up.
- Mentored developers while innovating solutions that integrated open-source tools with custom workflows, maximizing efficiency under limited startup resources.
- Assumed full ownership of the product's technical foundation, ensuring continuity of operations while establishing patterns for future scaling.

Full-time Software Engineer Intern, Wishroute, Inc. – Portland, ME Jan 2022 – Aug 2022

- Worked cross-functionally with Operations and Technical team members to synthesize requirements for internal and customer-facing analytics dashboards.
- Built SQL queries to allow for efficient, scalable KPIs and designed clear, insightful dashboards.
- Contributed to product development and updates to Java backend infrastructure in an AWS serverless architecture.
- Participated in business strategy and product development discussions.
- Embraced a dynamic high-growth startup environment and demonstrated the ability to adjust responsibilities to align against business priorities.

Education

Khoury College of Computer Sciences at Northeastern University, BS in Computer Science, concentration in Artificial Intelligence Sept 2020 – Dec 2024

- Relevant Courses: Artificial Intelligence | Natural Language Processing | Software Development
- Honors and Badges: **GPA: 3.41 / 4.00** | Northeastern Global Work Citizen Badge | Dean's List
- Activities: Spanish Honors Society (Sigma Delta Pi), Transportation Engineering Club, Refugee and Immigrant Cross-cultural Conversation Partner Program, Computer Science Mentorship Organization

Projects

Personal Retrieval Augmented Generation System (Python, LangChain)

- Developed a Python-based Retrieval Augmented Generation (RAG) system using LangChain and OpenAI's GPT models, implementing vector similarity search with ChromaDB and HuggingFace embeddings to enable accurate document retrieval and contextual question answering.
- Architected a scalable document processing pipeline supporting PDF, HTML, and Markdown formats, utilizing NLTK and unstructured.io for text extraction, with intelligent chunking and batch processing to handle large document collections efficiently.
- Implemented a configurable command-line interface with YAML-based configuration management, allowing dynamic selection of LLM models, fine-tuning of embedding parameters, and customization of retrieval settings for optimal performance.

311 Infrastructure Issues Identifier (Prototype) (Python)

- Performed text-classification on reports of Illegal Parking to diagnose infrastructure issues around Boston.
- Classification strategy: fuzzy keyword matching, with a pipeline to refresh data from Boston's 311 API.
- Implemented interactive front-end using MapBox GL to visualize geospatial data and support data filtering.
- Collaborated with the Boston Cyclist Union's Data Science team for inclusion into upcoming data-dashboard.

Boston Integrated Cycle Route Engine (BICRE) (Python, Flask)

- Augmented functionality of Google Maps to create integrated (cycling and transit) routes.
- Incorporated Google's Directions/Geocoding APIs, Maps JS Library; MBTA API to create routes.

Skills, Tools, and Technical Knowledge

AWS (Lambda, EC2, CDK, DynamoDB, CloudWatch, API Gateway, S3, etc.), React, TypeScript, Bash, Python, Next.js, Git, v0, BuildShip, OpenAI API, SQL, NumPy, Pandas, Scikit-Learn, PyTorch, Matplotlib, Mapbox