

# 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