Marcus Roldan

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Work Experience

Wishroute Inc.: **Full-time Software Engineer Intern** | Boston, MA | January 2022 – August 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.

Academic Experiences and Personal Projects

Bike Lane Obstruction 311 Report Detection System (GitHub Repo): *(Python)*

- Extracted reports of bike lane obstructions using unsupervised text classification through the Lbl2Vec model.
- Identification of obstructions is determined through the cosine-similarity of 311 reports and class-labels.
- Performed data pre-processing and evaluation of embedding strategies, along with hyperparameter validation.

AI for Automatic Comment Generation Research Project (GitHub Repo):

- Conducted a literature review and synthesized an annotated bibliography of the state of research in Sept. and Oct. 2023 regarding Large Language Models and other techniques for automatic comment generation.
- Utilized findings from the annotated bibliography to propose research recommendations.

Boston Integrated Cycling Route Engine (BICRE): *(Python, JSON, Flask, JavaScript, HTML, CSS)*

- 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.

Ridership and Operations Visualization Engine (ROVE): *(Python)*

- Adapted existing source code to allow for visualization and analysis of OV (Dutch) transit data.

Distributed Maze Game: (*Java, JUnit, JSON, Bash Scripting*)

- Executed test driven development to implement server/client communication via the Remote Proxy and Observer patterns utilizing TCP/Java Sockets to manage multiple game instances across clients
- Engaged agile development through extensive code-reviews across dynamic teams, code bases, and languages to ensure high readability and adherence to socially conscious development principles.

Education

Northeastern University, Boston, Massachusetts September 2020 – Present

Khoury College of Computer Sciences: Candidate for **Bachelor of Science in Computer Science**, expected 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

Technical Knowledge

Languages:	Java | Python | SQL | RISC-V | Bash | JavaScript | C | MIPS | Scheme
Systems & Applications:	Windows | Linux | AWS Suite | Git | IntelliJ IDEA | Metabase | Eclipse IDE | Mac