Monisha Krothapalli

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EDUCATION

University of Pennsylvania, School of Engineering and Applied Sciences, Philadelphia, PA ***May 2027***
Candidate for Bachelor of Science in Engineering (B.S.E.) in Computer Science (Concentration in **Artificial Intelligence**)
***Relevant Coursework*:** Data Structures & Algorithms, Computer Systems, Databases, Linear Algebra, Data Analytics, Calculus III
***Organizations*:** Women in Computer Science (Advocacy Committee)

TECHNICAL SKILLS

Programming Languages: Java, C#, Python, SQL, C/C++, Rust, HTML/CSS, TypeScript/JavaScript, OCaml, Assembly
Frameworks/Libraries: Node.js, Flask, React, React Native, Express.js, PyTorch, TensorFlow
Tools/Platforms: PostgreSQL, MongoDB, Neo4j, Azure, AWS, XCode, Figma, REST API

PROFESSIONAL EXPERIENCE

The Daily Pennsylvanian, Philadelphia, PA
Data Engineer *Sep 2024 – Present*

- Build **web-scraping automation** to extract headlines and generate content pitches, **increasing efficiency by 3 hrs/week**.
- Optimize **LLM** to generate **URL slugs and tags** to boost online article **discoverability** and **traffic** and conduct **A/B testing**.
- Analyze over **20+ years** of **ad revenue data** to optimize **pricing models** by incorporating factors such as holiday periods.

Quadrant Technologies, Redmond, WA
Software Engineering Intern *Jul 2024 – Aug 2024*

- Engineered cloud solutions with **Azure DevOps**, implementing complete **CI/CD pipelines** and **IaC** with **ARM Templates.**
- Created complex **SQL queries** and **ETL pipelines** using **SQL Server** and **Azure**, processing/transforming large datasets.
- Awarded **first place** among **100 interns** for the team final project, **FosterLink**, showcasing skills in cloud technologies.

Develop For Good, Remote
Product Manager *Nov 2023 – Feb 2024*

- Directed **6 developers** to design a STEM app for a clients business, scoping the **MVP** and creating an **actionable timeline.**
- Led **15+ client/team meetings** to align on objectives and guide the team from **user interviews** to the **final prototype.**

KEY PROJECTS

Amazon Product Bestseller Classification, http://bit.ly/3ZoEuKd
Tools – Python, Numpy, Pandas, Matplotlib, Seaborn, Scikit-learn, XGBoost, SMOTE, NLTK, Transformers

- Analyzing a **1.4M product dataset** to predict bestsellers with a 3-person team, achieving **91.67%** initial **testing accuracy**.
- Training **XGBoost** model w/ **hyperparameter tuning** and **sentiment analysis** of product reviews to enhance predictions.

FosterLink, https://github.com/mkro298/FosterLink
Tools – React, Python, Flask, MySQL, REST API

- Created FosterLink, a site for former foster kids to support each other, with a small team and Casey Family Programs.
- Coded **real-time forum feature**s such as posting, commenting, and upvoting to create a safe community space.
- Implemented **security features** in our **relational database** via **encryption algorithms** to protect user information.

MixEngine, https://github.com/mkro298/MixEngine
Tools – Python, Numpy, Pandas, Scikit-learn, Flask, React, REST API

- Engineered a **recommendation engine** that generates playlists by analyzing audio features of a user-selected track.
- Implemented a **ML content-based filtering algorithm** that ingests data from **1M+ tracks** to recommend similar songs.
- Leveraged the **Spotify API** for **song retrieval**, **user authentication**, and **playlist creation** in users' accounts.

Brush, https://github.com/mkro298/Brush
Tools – Rust, HTML/JavaScript/CSS, Node.js, WebAssembly

- **Designed** and **developed** Brush, a **programming language** created to simplify **digital art creation**, with 4 other students.
- Coded an **interpreter** and **compiler** for Brush syntax in the backend using **Rust** and built a **frontend online IDE**.