

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 A.I.)
Relevant Coursework: Data Structures & Algorithms, Operating Systems, Databases, Statistics, Applied ML, Big Data Analytics
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: PyTorch, TensorFlow, Node.js, Flask, React, React Native, Express.js
Tools/Platforms: PostgreSQL, MongoDB, Neo4j, Azure, AWS, Figma, REST API

PROFESSIONAL EXPERIENCE

Amazon, Greater Seattle Area, WA
Incoming Software Development Intern for AWS AI *May 2025 – Aug 2025*

University of Pennsylvania - School of Engineering and Applied Sciences, Philadelphia, PA
Research Assistant for Learning Driven Operating Systems *Jan 2025 – Present*

- Develop a **new OS system** in collaboration with **Dr. Sebastian Angel** and **UPenn, UW Madison, UT Austin, and UIUC**.
- Analyze **30.34M Linux kernel** codebase to identify **hardware resource allocation policies** and **optimize its infrastructure**.
- Investigate **integration points** where traditional management **heuristics** could be replaced/enhanced by **ML models**.

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

- Automated **content pitch generation** with **web-scraping automation** using **ML** relevance scoring, **saving 3 hrs/week**.
- Optimize **LLM** to generate **URL slugs and tags** to boost online article **discoverability** and **traffic** and conduct **A/B testing**.

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 final team project, showcasing ability to build **consumer-centric** products.

KEY PROJECTS

Dyscover - 2025 Wharton Hack-AI-thon 1st Place Winner, <https://github.com/shriyasane/wh-hackathon-2025>
Tools – Python, Numpy, TensorFlow, Gradio, OpenAI

- Developed an **AI-powered tool** to assist K-2nd grade educators with **flagging childhood dyslexia** through handwriting.
- Trained a **neural network** for **image classification** on students writing samples and integrated a **chatbot** with **OpenAI**.
- Presented Dyscover pitch deck at the **2025 Wharton AI & Analytics Initiative Advisory Board Conference**.

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.