Rohan Moniz

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Education

University of Pennsylvania, *Philadelphia, PA* **Expected May 2025**
B.S.E. and M.S.E. in Computer Science **Cumulative GPA: 3.83/4.00**
Relevant Coursework: Data Structures and Algorithms, Scalable and Cloud Computing, Computer Systems, Software Design/Engineering, Advanced Linear Algebra, Discrete Math, Probability, Statistical Inference, Operating Systems*, Analysis of Algorithms*, Databases*, Artificial Intelligence*, Rust Programming* *(* denotes Fall 2023)*

Technical Skills

Languages: Python, Java, C++, C, Golang, JavaScript/TypeScript, HTML/CSS, OCaml, Rust, R, LaTeX
Tools: Django, Flask, React, Express, Docker, Jenkins, AWS, MongoDB, Kafka, Solr, Spark, Presto, Superset, Git

Experience

University of Pennsylvania, *Philadelphia, PA* **August 2023 – Present**
Teaching Assistant: Introduction to Networks and Security

Bloomberg L.P., *New York, NY* **May 2023 – August 2023**
Software Engineer Intern
- Designed and implemented an ETL pipeline using **C++** to stream, process and load 200M+ position updates daily from **Kafka** and other sources into **Solr** cloud for data discovery and visualization on the Bloomberg terminal
- Provided TOMS clients and internal users with a faster and more streamlined method to identify firms with positions in a list of securities and other position-level metrics

Penn Labs, *Philadelphia, PA* **February 2023 – Present**
Backend Developer
- Develop and improve the **Django** backend API for Penn's official club platform, ensuring over 1,200 student organizations have a seamless experience with recruitment, member management, and communication
- Collaborate on Penn Course Search, a tool that enables students to explore classes with sub-100ms response times and gain insights into their coursework; supports full-text fuzzy and prefix search along with rich query syntax

Roku, Inc., *San Jose, CA* **May 2022 – August 2022**
Software Engineer Intern
- Built an automated validation framework using **Python** for Automatic Content Recognition (ACR) and Dynamic Linear Ad insertion (DLA), core advertising technologies for Roku's $2B+ platform business
- Leveraged Roku OS infrastructure to regularly run ACR validation framework across 10 TV platforms with 1,000+ models between them, ensuring ACR is not impacted by firmware releases and maintaining business continuity

Projects

Content Recommendation System **February 2023 – July 2023**
Python, Golang, Multithreading, Redis, MongoDB, Docker, Doc2Vec, FastAPI
- Architected and created a scalable, real-time content recommendation system incorporating 80,000+ articles to increase user engagement and revenue for The Daily Pennsylvanian, Penn's independent student newspaper
- Single-handedly implemented optimizations resulting in over 100x end-to-end latency boost from previous system

PennBook **November 2022 – December 2022**
Node.js, Express, Spark, AWS (DynamoDB, EC2, S3)
- Built a FaceBook-like social media application allowing users to post, comment, like, send instant messages to other users, and receive recommendations via an adsorption algorithm

VapeEscape **June 2019 – July 2020**
Swift, Python, Raspberry Pi, Arduino
- Developed an affordable and practical solution (Raspberry Pi-based prototype and iOS alert notification system) for schools and businesses to be notified of vaping or smoking in unauthorized areas as part of four-person team
- Won "Eliminating and Reducing Teen Vaping" category and Global Collaborator team awards at the 2019-20 Conrad Challenge, a global STEM innovation competition