

Aryaan Khan

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EDUCATION

Yale University

New Haven, CT

Bachelor of Science in Computer Science, Minor in Data Science

GPA: 3.91; Expected Graduation: December 2024

Relevant Coursework: Data Structures & Algorithms, Machine Learning, Natural Language Processing, Distributed Systems, Computational Intelligence for Games, Software Engineering, Systems Programming, Full Stack Web Programming

EXPERIENCE

Software Engineer Intern

June 2024 – Present

Capital One

McLean, VA

- Developed a **real-time** event processing system using **Go** and **AWS Lambda** to handle non-functional requirement changes for **1,000+ applications** and to notify stakeholders accordingly
- Streamlined governance processes by **automating form generation**, improving development efficiency for over **10,000 engineers** within the organization
- Received **Best Architecture** award at a company-wide **GenAI Hackathon**, developing a **chatbot** using **RAG** with **Llama 3** to assist developers with application requests and identify similar existing applications

Machine Learning Research Assistant

February 2024 – May 2024

Wu Tsai Institute | Yale University

New Haven, CT

- Designed a **causal transformer model** that predicts brain activity associated with mouse behavior, resulting in **85% accuracy** in neural data reconstruction
- Constructed a **ML pipeline** that automates data ingestion, model training configuration, and performance visualization, leading to a **90% reduction** in manual model development

Software Engineer Intern

August 2023 – December 2023

Garmin

Olathe, KS

- Integrated support for **10+ parameters** for a flight simulator in **.NET (C#)**, allowing for robust testing procedures
- Implemented **20+ module/system tests** in **Python** for an aircraft transponder system and ensured that communicating channels receive flight information with **100% accuracy**

Software Engineer Intern

June 2023 – August 2023

Savvas Learning Company

Los Angeles, CA

- Deployed a containerized **ETL pipeline** with **AWS Lambda** and a **MySQL** database with **Amazon RDS**, consisting of a Python script that collects and stores development data weekly
- Analyzed development data and provided feedback to engineering teams, increasing average team efficiency **by 25%** and reducing failures in production **by 20%**

PROJECTS

Y Office Hours | *Python, Flask, DynamoDB, React.js*

- Developed a virtual office hours platform to **centralize critical features**, such as video and live chatting, and **build additional features**, such as analytics and student profiles, improving upon the existing system at Yale
- Received **positive feedback** from **5+ professors**, collaborating with staff to deploy Y Office Hours into Yale's Computer Science department

Mudra Classifier | *PyTorch, OpenCV, MediaPipe*

- Fine-tuned a pre-trained ResNet18 model to identify classical Indian dance mudras (hand gestures) using a public dataset with **20,000+** gesture images, achieving **87% accuracy**
- Integrated the model into a **live video application**, enabling dancers to display and classify gestures in real-time

SKILLS

Languages: Python, Go, C, C#, C++, JavaScript, HTML, CSS, SQL

Technologies: AWS, PyTorch, Flask, React.js, Node.js, TypeScript, GCP, Git, MySQL, .NET, OpenCV, Docker, LangChain