

# 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, Computational Intelligence for Games, Software Engineering, Systems Programming, Distributed Systems, Full Stack Web Programming

## EXPERIENCE

### Software Engineer Intern

June 2024 – Present

Capital One

McLean, VA

- Build a **real-time event processor** with **serverless AWS** to automate governance processes amid requirements changes

### 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 frontend/backend support for **10+ parameters** for a flight simulation application in **.NET (C#)**, including aircraft addresses, position, and velocity, allowing for robust flight-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

- Developed a dashboard that visualizes development performance, including deployment frequency and release failure rate, using **React.js**, **TypeScript**, and **Node.js**
- Analyzed development data and provided feedback to engineering teams using the dashboard, increasing average team efficiency **by 25%** and reducing failures in production **by 20%**
- 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

## 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**, continuing to collaborate with staff to deploy Y Office Hours into Yale's Computer Science department

### PhishHook | PyTorch, JavaScript

- Implemented a **Chrome extension** and trained a **neural network** to analyze and score URLs for **phishing potential**, achieving an **97% accuracy** and improving users' online safety

### Key-Value Sharded Service | Go

- Engineered a key-value sharded storage service with **dynamic shard distribution** across multiple servers, ensuring a **scalable**, **load-balanced**, and **fault-tolerant** infrastructure

## SKILLS

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

**Technologies:** PyTorch, scikit-learn, NumPy, AWS, Flask, React.js, Node.js, Git, MySQL, .NET, Docker