Aryaan Khan

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EDUCATION

Yale University New Haven, CT

B.S. in Computer Science, Minor in Data Science; GPA: 3.92 *Expected Graduation: December 2024*

Coursework: Data Structures, Algorithms, Systems Programming, Distributed Systems, Full Stack Web Programming, Discrete Math, Probability Theory, Multivariate Statistics

SKILLS

Languages: Python, C, Golang, C++, C#, JavaScript, HTML, CSS, SQL, R
Technologies: React.js, TypeScript, AWS, GCP, Node.js, Express.js, Flask, Firebase, MySQL, Docker, Pandas, Git

EXPERIENCE

Software Engineer Intern August 2023 – Present

Garmin International *Olathe, KS*

- Develop and maintain the Garmin Airborne Traffic System, specializing in aerial collision avoidance algorithms
- Construct embedded software in **C** and build supporting tools and testing platforms in **C++**, **C#**, and **Python**

Software Engineer Intern June 2023 – August 2023

Savvas Learning Company *Los Angeles, CA*

- Implemented a dashboard that illustrates development performance metrics, 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

Software Developer August 2022 – May 2023

Yale Computer Society *New Haven, CT*

- Developed and supervised a platform for exploring course information, demand statistics, and evaluations by regularly integrating new and in-demand features
- Built a semester workload calculator using **React.js**, **TypeScript**, and **Python** to streamline course planning and workload assessment, resulting in **6000+ users**

Data Scientist Intern May 2022 – May 2023

Yale School of Medicine *New Haven, CT*

- **Automated 90%** of the lab's data analysis by developing a Python program that parses large datasets using **Pandas** and generates **cluster models** of differentially expressed genes
- Generated **10+ published figures** using Matplotlib to identify molecular mechanisms that underly Alzheimer-like diseases, earning **co-authorship** of two peer-reviewed publications

PROJECTS

Key-Value Sharded Service | *Golang*

- Engineered a key-value sharded store with **dynamic shard distribution** across multiple servers, ensuring **scalability**, **load-balancing**, and **fault tolerance**
- Improved throughput **by 30%** by implementing a cache layer with hot key detection to optimize read/write operations

Generous Interface for Dura Europos | *Next.js, TypeScript, Flask, SQLite, Python*

- Created a web application that provides a tool for exploring the archaeological site Dura Europos, resulting in **100% satisfaction** from **10 prominent researchers** in the field
- Implemented an interactive map that allows users to navigate through **10,000+ artifacts** and access a collection of **100+ images** from the site

New York Travel | *React.js, Node.js, Express.js, SQLite, Python*

- Constructed a web application that allows users to create New York itineraries, access a visual timeline of their trip, and explore flight options