Oluwatobi Olajide

olola73@morgan.edu | (301)-232-2137 | LinkedIn | GitHub | Website

EDUCATION

Morgan State University **Baltimore, Maryland**

B.S in Computer Science *Expected Graduation, May 2027*

- **Related Coursework:** Computer Systems, Data Structures and Algorithm

SKILLS

Programming: Python, JavaScript, Typescript, Rust, SQL, HTML/CSS

Libraries: Express, React, Flask, Next.js, Jquery, Node.js, Pandas, MySQL, Postgres, Sqlalchemy, Pytorch, Scikit learn

Tools: Mongo, Firebase, Git, Docker, Bash, Linux, AWS, Google Cloud Platform, SDKs, Postman

Experience

Cosmos (Python, Flask, Expresss.js, Mongo, Typescript, Node.js, React)

Full Stack Engineer *September 2024*

- Developed a scalable Python backend with mongo engine (ORM) for efficient data modeling of messages, events, organizers, and notifications. Integrated Redis Queue to optimize background tasks like notifications, emails, and AWS S3 uploads, achieving an 80% increase in speed.
- Engineered real-time communication with websockets. Optimized lookup operations using a Trie data structure for fast text search and Redis for caching frequently accessed data.
- Containerized the application using Docker, configured Nginx as a reverse and SSL proxy to enhance performance and security. The application has 20 active users, with about 10 events created daily.

PROJECTS

Productivity (Expresss.js, Redis, Typescript, Node.js, Kafka)

Backend Engineer *December 2024*

- Architected a micro service-based system using Express.js and Kafka to aggregate and analyze data from Canvas (announcements) and Google (emails), assigning priorities with GPT and storing results in a Redis sorted set.
- Implemented a Dockerized environment with five containers managed via docker-compose, and optimized real-time data fetching with a cron job running every 30 minutes.
- Leveraged APIs (Google API, Canvas API) for seamless data integration, ensured scalability with event-driven architecture, and resolved priority collisions using timestamp-based adjustments.

Redis Implementation in Python (Python)

Systems Engineer *November 2024*

- Engineered an in-memory key-value data store replicating Redis functionality with core commands like GET, SET, EXPIRE, and time-to-live management using Python.
- Optimized for thread-safety and concurrency by employing multi-threading techniques to support simultaneous client operations with consistent performance.
- Implemented a clean code architecture while demonstrating proficiency in data structures, algorithm design, and low-level systems programming to deliver a robust, maintainable, and scalable solution.

Project Space (Python, Flask, Pinecone)

Backend Engineer *October 2024*

- Developed the backend of a project collaboration platform using Flask, Docker, and Mongo Engine ORM, enabling users to post and discover projects through 1-minute pitch videos.
- Implemented AI-powered search by transcribing and embedding project descriptions with GPT embeddings, storing data in Pinecone for efficient similarity-based search.
- Managed media uploads to AWS S3, integrated Websockets for real-time messaging.

AWARDS

Web Development Competition **Baltimore, Maryland**

Hosted by Google and Society for Advancement of Computer Science (SACS) *Dec 2023*

- Secured 1st place as part of a three-member team for an outstanding web application project (Teachable).

Google HBCU Hackathon **D.C, Washington**

Hosted by Google *March 2024*

- Achieved a top 6 placement as part of a four-member team for an outstanding application (Culture Connect).