Muhammad Muzzammil

mmuzzammil19@gmail.com ❖ (312) 889-4606 ❖ Chicago, IL ❖ https://github.com/mmuzza

WORK EXPERIENCE

Computer Science Tutor   **January 2024 - May 2024**
Data Structure, Programming 1, Programming 2   *University of Illinois*
at Chicago

- Conducted numerous group and individual tutoring sessions for juniors and sophomores in the Computer Science department, resulting in marked academic progress and enhanced student engagement.
- Coordinated training sessions on beginner and advanced C++ programming topics, including exception handling, arrays, and OOP principles; mentored students to achieve proficiency in data structures and algorithms.

Freelance Developer   **June 2023 - August 2023**

- Deployed a robust billing API using GoLang, optimizing the company's billing system for scalability and performance, leading to a reduction in payment discrepancies & an increase in billing system efficiency.
- Integrated a billing microservice with the Stripe API, improving one-off and subscription payment processing and boosting monthly recurring revenue.
- Architected Stripe API webhooks to automate subscription renewals and cancellations; improved workflows, reducing billing errors and increasing customer retention.
- Built, and maintained CI/CD pipelines for automated Docker image building and Kubernetes deployment of the billing microservice; increased deployment frequency & minimized manual errors.

SKILLS

- **Programming Languages**: C, C++, Python, Dart, JavaScript, Java, Scala, C#, F#, GoLang.
- **Databases**: Relational (MySQL, SQLite) and NoSQL (MongoDB).
- **Containerization and Orchestration**: Docker, Kubernetes.
- **Big Data Technologies**: Hadoop, Apache Spark, AWS EMR.
- **Mobile Development**: Flutter.
- **Web Frameworks**: Akka HTTP, Express.js.

EDUCATION

University of Illinois at Chicago   **May 2024**
B.S. Computer Science   *Chicago, IL*
GPA: 3.7

- ☐ Studied diverse Computer Science topics: Systems Programming, Algorithms, Cloud Computing, Software Engineering, Data Structures, Software Design, Database Systems, & Mobile Development.

PROJECTS

- **CloudCop Pursuit:** Orchestrated a Policeman/Thief graph game for CloudCop Pursuit using Akka HTTP and microservices on AWS EC2, reducing latency by 35% and increasing player satisfaction.
- **SkillsMitM Attack Simulation:** Spearheaded development of an Apache Spark program for SkillsMitM Attack Simulation, enhancing cybersecurity readiness. Deployed on AWS EMR for scalability and performance during testing.
- **GraphMatch Pro:** Engineered GraphMatch Pro, a robust distributed graph processing solution leveraging Apache Hadoop framework; optimized algorithm efficiency by 40% and reduced processing time by 60% for large-scale data sets.
- **File Compression:** Crafted a C++ solution that leveraged Huffman encoding to compress file sizes, leading to a substantial enhancement in storage efficiency and reduction in data transfer times.
- **Library Management:** Pioneered a desktop application that streamlined library administration using PostgreSQL; slashed catalog search time and improved user experience.
- **Multiplayer Poker Game:** Engineered a Java-based multiplayer poker game using multithreading to boost concurrent player capacity by 40%, enhancing user experience and engagement.
- **Search Engine:** Constructed a search engine with semantic search to improve information retrieval, reducing query time and increasing accuracy.