Fady Youssef

fyoussef@zagmail.gonzaga.edu | 206-371-3836 | fadyyoussef.dev | LinkedIn: justfadyy | GitHub: JustFady

Work Experience

Cloud & Data Engineering Intern, Pangeon – Spokane, WA May 2024 – November 2024

- **Optimized cloud infrastructure** by integrating AWS Elasticsearch with EC2, enhancing **large-scale data indexing and search queries**. This significantly accelerated data ingestion, improved **resource utilization**, and reduced costs while enabling faster processing of complex queries.
- **Developed and deployed API endpoints** for **AI-driven data processing** using AWS API Gateway and Lambda, enabling **real-time data access and model inference**. Optimized **data flow between cloud services**, enhancing system responsiveness and scalability.
- **Designed and optimized data cleaning pipelines** to **preprocess, standardize, and transform large datasets**, ensuring **high data accuracy and consistency** for analytical models. Streamlined **ETL workflows**, improving processing efficiency.

Technical Projects

HoopMetrics

- Developed a **cloud-based NBA analytics dashboard** using Python and AWS S3, enabling **real-time data storage** and retrieval for player statistics.
- Created **interactive visualizations** with Matplotlib and Pandas to analyze **player trends, performance metrics**, and team comparisons.
- Optimized **API-driven data pipelines** for **efficient querying** and **faster data processing**, improving system responsiveness.

Hospital Management System

- Developed a **hospital management system** in Java to handle **patient records, doctor assignments, and billing**, ensuring seamless data management.
- Implemented **file-based storage** for persistent data handling, eliminating the need for a database while maintaining structured and retrievable records.
- Designed a **simple console interface** to provide an intuitive user experience while applying **object-oriented programming principles** for maintainability and scalability.

Heat Transfer Modeling

- Collaborated in a **4-person research team** to develop a heat transfer simulation, starting with **real-world physical experiments** before translating findings into a **computer model** using **C# and JavaScript**.
- Simulated **heat transfer rates**, demonstrating how an **80°C temperature drop occurs in 180 seconds**. The program delivers **real-time calculations** with **0.5°C accuracy**, closely matching experimental results.

Education

Gonzaga University, BS in Computer Science Expected May 2026

- **Major:** Computer Science, B.S. (Cumulative GPA: 3.05/4.0)
- **Concentration:** Software Security
- **Coursework:** Data Structures and Algorithms, Software Development, Web Development, Computer Organization, Applied Data Science, Applied Cryptography, Computer Security, Linux/DevOps, Organization of Programming Languages, Experimental Statistics, Discrete Math, Ordinary Differential Equations

Technical Skills

Languages: C++, Python, Java, R, JavaScript, SQL
Frameworks & Libraries: ReactJS, NLTK, SpaCy, Pandas, OpenCV
Cloud & DevOps: AWS (S3, EC2, OpenSearch), Docker, Linux (Bash/zsh), Git