AUGUSTINE ASUMADU

Software Engineer | AI-Enabled Systems | Distributed Applications

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SUMMARY

Software Engineer with experience building production-scale, AI-enabled systems in healthcare and enterprise environments. Strong background in backend and frontend systems, distributed services, and applied machine learning. In Addition, pursuing an M.S. in Computer Science at Georgia Tech with two concentrations in Artificial Intelligence, and Machine Learning.

WORK EXPERIENCE

SOFTWARE ENGINEER
Optum (United Health Group)

July 2023 – Present   Boston, MA
- Designed and Implemented an AI-powered enrollment automation platform processing 14,000+ healthcare cases, enrolling ~20,000 members.
- Engineered backend services using Python (Flask) and Kafka to stream, classify, and process email-based enrollment workflows.
- Integrated OpenAI models to extract intent and structured data from unstructured emails with human-in-the-loop validation.
- Developed frontend interfaces using React (TypeScript) to enable rapid review and approval of AI-processed enrollments.
- Optimized system performance, increasing enrollment throughput by over 400% and reduced per-case processing time from minutes to seconds.
Awards (quarterly): Engineering Expertise (6x), Innovation Champion(2x), Team Excellence (3x).

SUPPLY CHAIN LEADER
PepsiCo

June 2022 – JULY 2023   KILLINGLY, CT
- Built a real-time data collection and visualization tool to surface operational bottlenecks and performance insights.
- Led packaging operations and identified efficiency, waste, and downtime trends across manufacturing lines.
- Applied data-driven decision-making to improve throughput, safety, and frontline team effectiveness.

TECHNICAL SKILLS

Languages: Python ,Java, TypeScript, JavaScript, SQL, C++, HTML/CSS.

Backend & Systems: Flask, REST APIs, Spring Boot, Kafka, MongoDB, Distributed Systems Design, Kubernetes

Frontend: React, Next.js, Node.js

AI & Machine Learning: PyTorch, Pandas, TensorFlow, OpenAI APIs, Scikit-learn, Supervised, Unsupervised, Optimization, & Reinforcement Learning, Neural Networks, Search Algorithms.

PERSONAL PROJECTS

Generations
Link: https://myfamilygenerations.com
A comprehensive genealogy platform empowering users to track their family lineage. Built with complex graph data structures for relationship mapping and optimized for large datasets.

Finance Budgeting App
In Progress
A high-performance personal finance and budgeting platform. Features real-time budgeting, net worth tracking, spending and Transaction Analytics. Building with Next.js and secure banking integrations (Plaid)

Resume & Portfolio Website

Link: augustineasumadu.com

EDUCATION

M.S : Computer Science (Machine Learning, AI)
Georgia Institute of Technology
In Progress| GPA**:** 4.0
Relevant Courses:
Machine Learning, Computer Networks, Artificial Intelligence, Knowledge Based AI- Cognitive Systems

B.S: Management Information Systems**,** Computer Science
Worcester Polytechnic Institute   2018-2022
GPA**:** 3.52

CERTIFICATIONS

Azure Fundamentals (Microsoft)
AI Dojo (Optum)