Matthew Allpass

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Professional Summary

Recent B.S. Computer Science graduate with hands-on experience in backend development, DevOps/MLOps, and cloud deployment. Designed, built, and deployed production ready systems integrating machine learning models, CI/CD pipelines, and containerized services. Strong foundation in data structures, algorithms, and Agile workflows, with a track record of delivering scalable, reliable systems. Seeking an entry-level Backend, DevOps, or MLOps engineering role.

Technical Skills

Programming Languages: Java, Python, JavaScript, SQL, C++
Backend & APIs: FastAPI, Spring Boot, Node.js, REST
DevOps & MLOps: Docker, GitHub Actions, MLflow, CI/CD
Frontend: React, HTML/CSS
Machine Learning: Scikit-learn, pandas, numpy, TensorFlow, PyTorch
Cloud & Infrastructure: Render, Supabase (PostgreSQL), TCP/IP networking
Tools & Methodologies: Git/GitHub, Linux, Agile/Scrum, Postman, Test-Driven Development

Projects

Credit Card Fraud Detection - DevOps/MLOps Pipeline
Technologies: Python, FastAPI, Scikit-learn, Docker, GitHub Actions, MLflow, PostgreSQL, Render, React
-Designed and deployed an end-to-end fraud detection system processing 284k transactions, using Dockerized microservices, and Github Actions CI/CD to enable rapid, reliable updates.
-Integrated MLflow for experiment tracking, improving AUPRC from 85% to 92% after retraining.
-Architected cloud deployment with FastAPI backend, React frontend, and PostgreSQL on Supabase.

VR UI Placement Study (Capstone)
Technologies: Unity, C++, ML-Agents, Reinforcement Learning
-Developed VR puzzle room for Meta Quest 3 with gesture, voice, and RL-based UI controls, simulating dynamic interface placement in immersive environments.
-Conducted user study (n=10); authored formal research paper analyzing user preference and performance, finding manual multimodal input outperformed automation and RL by 30% in task completion speed.

TCP Quiz Show Game
Technologies: Python, Sockets, PyQt5
-Built a multiplayer quiz game supporting 10+ concurrent players with real-time score synchronization over TCP.
-Implemented server-client architecture, with mid-game joining and synchronized state.

Professional Experience

Lead Line Cook - *Roadhouse Cinemas, Simmer, Jay's Bistro | 2021-2024*
-Led teams of 6-12 staff members per shift, managed inventory, and trained staff under high pressure conditions.

Education

B.S. Computer Science - Colorado State University | *May 2025* | GPA 3.2
Relevant Coursework: Operating Systems, Data Structures & Algorithms, C/C++ Programming, Software Engineering, Software Testing, Computer Networks, Databases, Machine Learning, Cybersecurity