Charles Borromeo

chaborrom@gmail.com | linkedin.com/in/charles-borromeo | github.com/chalesborromeo

Experience

AI Intern, Prallax Consulting – Washington, DC Jul 2024 – Present

- Built and scaled a resume screening SaaS pipeline integrating **Azure OpenAI, Form Recognizer, and Zapier**, cutting manual review time by 85%.
- Designed microservice-style architecture with resume parsing, blob storage, and automated triggers, processing 200+ documents per month reliably.
- Wrote and reviewed code in **Python and JavaScript** contributing to RESTful API design and integration.

Researcher, Illinois State University – Normal, IL Aug 2024 – May 2025

- Engineered C++ simulation pipelines processing 1,000+ neuronal firing events with modular, testable code.
- Optimized computational models with **object-oriented design and unit testing**, achieving a 92% match with biological datasets.
- Visualized system performance with GNUPlot and Python dashboards, ensuring accuracy across large-scale simulatiions.

Projects

Unity Engine and Machine Learning Research

- Developed a reinforcement learning simulation in Unity (C# + Python) with custom 3D environments modeled in Blender, training agents over 10,000+ episodes.
- Boosted agent win rate by 65% through reward shaping, curriculum design, and parallelized CUDA training.
- Simulated 200+ dynamic interactions per match, incorporating physics-based responses and real-time feedback loops for agent adaptation.

Azure Resume Parser & Screener (AI + Automation)

- Delivered feature enhancements across 3 client pipelines, enabling end-to-end automated candidate evaluation.
- Designed data flow architecture integrating Outlook, Zapier, and Blob Storage for real-time resume ingestion.
- Proactively restructured parsing modules to support future scalability and reduce downstream failures.

Splunk Weather Monitoring Dashboard

- Ingested live Open-Meteo API data into Splunk via HTTP Event Collector (HEC).
- Built SPL dashboards to visualize hourly temperature, humidity, precipitation, and wind.
- Automated hourly ingestion with Python + Task Scheduler and set alerts for anomalies.

Temperature Effects on Neuronal Firing Rates

- Simulated 1,000+ neuronal firing events in **C++** across 20–42°C to study seizure risk under thermal stress.
- Modeled tonic-to-bursting transitions with differential equations, achieving 92% accuracy vs. biological datasets.
- Visualized firing frequency shifts with 30+ comparative plots in GNUPlot.

Education

B.S.in Computer Science – Dean's List Honoree (Expected May 2026) Illinois State University

Technical Skills

Programming Languages: React, Node, Go (working knowledge), Python, JavaScript, C++, C#, Haskell, SQL, HTML/CSS

Cloud Platform & Monitoring: Azure (OpenAI, Blob Storage), AWS (ECS, S3, Kinesis), Docker, Kubernetes (familiar)

Frameworks & Tools: React, Flask, Unity, Blender, Postman, Git, Jira, Confluence

Concepts: RESTful API design, microservices, object-oriented programming, Agile development, secure software design