Jordan Umusu

770-778-7268 | jordanumusu@gmail.com | LinkedIn | Github

Education

Georgia Institute of Technology — Atlanta, GA
Bachelor of Science in Computer Science — *Aug. 2021 – December 2024*

Experience

Google — New York, NY
Software Engineering Intern — *May – Aug 2024*

- Built end-to-end bookmarking system from React frontend to Java/gRPC backend, deployed to 1K+ beta users
- Architected data pipeline processing 500K+ user sessions using materialized views and tokenized search
- Significantly reduced bookmark retrieval time through client-side caching and query optimization
- Implemented A/B testing framework to measure feature impact on user engagement

Echo Labs — San Francisco, CA
Software Engineer — *Jan – April 2024*

- Designed fullstack video platform: Svelte frontend, Python/PostgreSQL backend, WebSocket real-time updates
- Built ML data pipeline ingesting 1K+ weekly videos for Whisper-powered transcription processing
- Reduced transcriber-to-job latency by 40% by implementing WebSocket event streaming
- Implemented OAuth and row-level security for multi-tenant platform

Google — New York, NY
Software Engineering Intern — *May – Aug 2023*

- Deployed automated service for Drive metadata wipeouts, eliminating manual review for common deletion cases
- Built distributed event processing system with Java/Protobufs, handling GDPR compliance at scale

Projects

AI Accent Trainer | *React, FastAPI, Wav2Vec2* — August 2025 - Present

- Built pronunciation analysis tool using Wav2Vec2 to evaluate both prosody and phoneme accuracy
- Integrated LLM-powered coach providing targeted phonetic feedback and pronunciation tips
- Implemented multi-language support with TTS for reference pronunciation demonstrations

Transformer Implementation from Research | *Python, PyTorch, CUDA* — July 2025 - Present

- Implementing attention mechanism and multi-head architecture from "Attention is All You Need" paper
- Building custom training loop with gradient accumulation and mixed precision for efficient GPU utilization
- Developing visualization tools to understand attention patterns and model behavior during training

Neural Network & Learning Framework | *Python, PyTorch* — June 2025 - Present

- Built neural network components from scratch including forward pass, loss calculations, and custom learner
- Implemented visualization system showing weight updates, gradient flow, and decision boundaries in real-time
- Used PyTorch for data loading while implementing core algorithms manually to deepen understanding
- Achieved ~95% accuracy on MNIST through custom architecture and hyperparameter optimization

Technical Skills

Languages: Python, Java, TypeScript, JavaScript, SQL
AI/ML: Deep Learning, PyTorch, Vector Databases, Speech Recognition
Web Development: React, Next.js, FastAPI, Node.js, PostgreSQL, gRPC, Docker