Aaron Du

Computer Science Student | AI Engineering: LLM Agents, Python, AWS
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SUMMARY

CS student at NYIT with an AI concentration (December 2027), building LLM agents and the backend systems around them, with shipped work on AWS, Spring Boot and React. Seeking Summer 2027 software and AI engineering internships in New York City.

EDUCATION

New York Institute of Technology, Old Westbury, NY Expected Dec 2027
B.S. in Computer Science, Concentration in Artificial Intelligence
Relevant coursework: Programming for Artificial Intelligence and Artificial Intelligence I (in progress), Data Structures, Discrete Structures, Database Management, Computer Organization and Architecture, Theory of Computation

PROJECTS

NFL Fantasy Agent, Open Agent Hackathon 2026 (GenAI Works) Oct 2026
Python, NVIDIA Nemotron, Zetaris (Spark SQL), DuckDB, Docker, GitHub Actions, pytest | github.com/Duaarondu/nfl-agent

- Led development on a two-person team (82% of commits) of a multi-agent LLM system (Planner, Analyst, Critic) that answers fantasy football lineup and waiver questions with verdicts grounded in SQL-retrieved data.
- Designed a Critic agent for hallucination detection that checks every number in an answer against its source query rows and forces revision (up to 3 rounds), blocking fabricated stats before users see them.
- Grounded generation in 7 nflverse tables through 16 SQL query plans on a Zetaris Spark cluster with a DuckDB offline mode; a live sweep of 278 distinct queries returned 0 SQL errors.
- Cut full-run latency from 129–350s to 18–135s by diagnosing that the model runtime ignored the reasoning-off flag and moving to the version that honored it.
- Co-built a per-user league memory engine from Meterless's published H-MEM spec that passes its conformance suite (13/13); shipped with a 612-test pytest suite, Docker, GitHub Actions CI and JSONL tracing of every step.

LIRR Live Train Visualizer, personal project Feb 2026
Java, Spring Boot, GTFS-Realtime (protobuf), React, React Leaflet, Railway, Vercel | github.com/Duaarondu/lirr-app

- Built Spring Boot REST APIs that parse the MTA's GTFS-Realtime feed and join it with static schedule data to place live LIRR trains and delays on a map.
- Built a React Leaflet frontend showing all 10 branches in official colors, refreshing train positions every 10 seconds; deployed on Railway and Vercel with CORS handling and Bucket4j rate limiting.

AWS RSVP Website, personal project Dec 2025
AWS Lambda (Node.js), API Gateway, S3, CloudFront, RDS (MySQL), DynamoDB, CloudWatch | github.com/Duaarondu/AWS-RSVP-WEBSITE

- Built a serverless RSVP app with five REST routes on API Gateway and a Node.js Lambda, and a static frontend on S3 and CloudFront.
- Stored events in MySQL (RDS) and RSVPs in one DynamoDB table; a DynamoDB transaction records each RSVP and updates its count together, rejecting duplicate RSVPs with a 409.

OnlineStore, CSCI 300 Database Management final project Nov–Dec 2025
Java, Java Swing, MySQL, JDBC | github.com/Duaarondu/CSCI-300-Final-Project

- On a three-person team, built the admin side of a Java Swing and MySQL store app (accounts, employees, items, coupons, order editing) using JDBC with parameterized queries.

WORK EXPERIENCE

Event Technology Specialist, Ultimate Sound DJs (Mineola, NY) Aug 2024 – Present

- Set up and ran event technology at about 200 weddings, sweet 16s and bar/bat mitzvahs, including speakers, lighting, wireless mics, projectors and photo booths.
- Consolidated a year of about 2,000 venue-referred leads into one Excel workbook with ChatGPT, then checked and cleaned the data by hand.
- Identified the venues that sent the most leads, which led the business to host a showcase event for venue partners with about 100 attendees.

TECHNICAL SKILLS

AI and LLM: Multi-agent systems, LLM orchestration, hallucination detection, grounded generation, agent memory, NVIDIA Nemotron, Claude Code
Languages: Python, Java, SQL, JavaScript, HTML/CSS
Backend and Cloud: REST APIs, Spring Boot, AWS (Lambda, API Gateway, S3, CloudFront, RDS, DynamoDB, CloudWatch), Docker, GitHub Actions, Railway, Vercel
Data: MySQL, DynamoDB, DuckDB, Spark SQL (Zetaris), Polars, Parquet, JDBC, Excel
Frontend and Tools: React, React Leaflet, Java Swing, Git, pytest, HoneyBook