

THIERNO DIALLO

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EDUCATION

The City College of New York | New York, NY

Expected Dec 2027

Bachelor of Science in Computer Science

WORK EXPERIENCE

Brainstorm: Software Engineering Intern

10/2025 – 12/2025

- Built a lightweight **backend pipeline in Go** to automate daily health-data tracking and flag anomalies across community devices.
- Integrated backend APIs** with a **TypeScript data layer**, enabling **real-time** updates and insights across the platform's UI.
- Deployed a **CLI tool** to refresh data and generate reports, improving transparency and reducing manual updates by **~30%**.

Deloitte: Software Engineering Intern

02/2025 – 04/2025

- Developed and maintained **3 RESTful APIs** with Node.js/Express.js to fetch and process **real-time MTA transit data (~100k+ records/day)**.
- Designed and optimized PostgreSQL schema for **1M+ rows** of route/schedule data, improving query **speed by 30%**.
- Implemented **caching for frequently searched** transit routes, reducing average API response times by **45%** (1.6s to 0.9s) and cutting redundant database queries by **~40%**, leading to noticeably smoother customer experience.

PROJECTS

Cherno CLI | [Github](#) | [Demo](#)

10/2025

- Built an AI-powered **CLI coding agent** using Python, Pydantic, Rich, and the OpenAI Responses API, allowing developers to perform code edits and commits directly from natural-language prompts.
- Integrated a modular planning engine and sandboxed execution layer (Local & E2B-ready), **reducing task-switching time by over 40%** by keeping the entire workflow inside the terminal.
- Developed an interactive REPL with Prompt Toolkit, supporting diff previews, dry-run, rollback, and batch edits for safe and efficient code generation.

Dreamers AI Agent | [Github](#) | [Demo](#)

08/2025 – Present

- Built an AI agent assistant for CCNY immigrant students (in-state tuition, NYS Dream Act/TAP, scholarships) with source-cited answers, **reducing manual research time by around 50%**.
- Implemented Firecrawl retrieval with TTL disk cache + warm-cache, LangGraph orchestration with schema-validated prompts, and structured "resource cards" (plus CSV export).
- Shipped a React + Tailwind UI on Next.js (Vercel) with a FastAPI (Render) backend, connected via a serverless proxy that enforces request timeouts and no-store caching.

Yamalverse | [Github](#) | [Demo](#)

6/2025 – Present

- Built a full-stack web app with Next.js (React) + Supabase/PostgreSQL to track and visualize Lamine Yamal's career, using serverless API routes and SQL aggregations for fast filtering.
- Designed an interactive Tailwind UI with responsive cards and faceted filters; modeled a normalized Postgres schema for flexible, efficient queries.
- Deployed on Vercel; **reached 1,000+ unique visitors** in 14 days, with lightweight analytics and performance tuning for quick loads.

SKILLS

- Languages/Frameworks:** Python; TypeScript/JavaScript; C++; SQL (PostgreSQL); React; Next.js (App Router); Tailwind CSS; Node.js; FastAPI
- AI/Retrieval:** OpenAI API; LangGraph; Firecrawl (retrieval/web scraping)
- Tools/DevOps:** REST APIs; Git; CI/CD (Vercel, Render, GitHub Actions); Supabase