

# Hsiang Yu Huang (Anna)

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## EDUCATION

### Boston University

Master of Science in Data Science | GPA: 3.59 / 4.0

Boston, MA

Dec. 2025

Relevant Courses: Deep Learning, Graduate Databases, Data Engineering, Time Series, Artificial Intelligence, Crypto

### National Taiwan University of Science and Technology

BBA in Industrial Management and Bachelor Program of Finance, Minor in Computer Science | GPA: 3.85 / 4.3

Taipei, Taiwan

Jun. 2023

Relevant Courses: Algorithms, Machine Learning, Data Analytics, Statistics, Object-Oriented Programming

## SKILLS

- **Languages & Frameworks:** Python, SQL, C++, TypeScript, JavaScript, R, FastAPI, Next.js, Node.js, Flask, React, HTML/CSS
- **Cloud & DevOps:** AWS (Lambda, S3, EC2), Azure, PostgreSQL, MongoDB, Docker, Linux, Nginx, CI/CD, Git
- **Data Engineering & Tools:** PySpark, ETL Pipeline Automation, SQL Database Design, Azure Synapse, PostHog, Power BI
- **AI Engineering & ML:** LangGraph, LangChain, MCP, PyTorch, TensorFlow, Scikit-Learn, Pandas, NumPy, NLP, Time Series

## WORK EXPERIENCE

### Full Stack Developer – [Citale](#) ([citaleco.com](#))

Boston, MA

BU Spark! Launch Lab (Stipend) | Stack: Next.js, SQL, Supabase, Google Maps API, Vercel, PostHog

Sep. 2024 – Present

- Recruited to the engineering team of a BU Spark! incubated startup, earning a \$500 stipend for contributions.
- Designed **PostgreSQL database schemas** and Implemented backend data retrieval and real-time map features using **Next.js, Supabase, and Google Maps API**.
- Successfully launched the MVP to production, serving **200+ unique users** and utilizing **PostHog** for analytics.

### Research Assistant – [LLM Platform](#)

Boston, MA

BU BIT Lab (Unpaid) | Stack: FastAPI, Next.js, MongoDB, LangGraph, Prompt Engineering, OpenRouter, MS Clarity Sep. 2025 – Present

- Architected a **RESTful API using FastAPI** to orchestrate a **LangGraph multi-agent system**, managing asynchronous communication between Coordinator, Writer, and Reviewer agents.
- Designed a **MongoDB schema** to store complex conversation history and retrieval contexts, ensuring efficient data persistence for the multi-model console.

### Research Assistant – Machine Learning for Sales Forecast

Taipei, Taiwan

NTUST Artificial Intelligence and Decision Analysis Lab | Stack: R, XGBoost, Time Series Analysis

Nov. 2023 – Jul. 2024

- Built an **ARIMA–XGBoost** forecasting pipeline, boosting predictive accuracy ( $R^2$ ) from **8.3% to 73.4%**.
- Developed a **conditional rolling window model** to enable adaptive, real-time predictions.

## PROJECTS

More Projects are available here: [hsiangyuhuang.com/projects](http://hsiangyuhuang.com/projects)

### [Boston Weekend Agent](#)

Boston, MA

Stack: AWS (Lambda, Step Functions, EC2, S3), Python, LangChain, Cron

Nov. 2025

- Orchestrated a serverless ETL pipeline using **AWS Step Functions** and **Lambda** to ingest real-time event data.
- Deployed an **EC2**-based web scraper with **Cron** jobs to bypass anti-bot restrictions for reliable data extraction.
- Generated AI summaries via **LangChain** and stored static JSON in **S3** for low-latency frontend delivery.

### [From Tweets to Trends – Predicting Stock Volumes Using X Sentiment](#)

Boston, MA

Course: Big Data Engineering | Stack: Azure Functions (Python), ADLS Gen2, Rapid API

Feb. 2025 – May. 2025

- Leveraged **Azure Functions (Timer Trigger)** to establish **Cron-based automation** for the daily ingestion of social media streams from X (Twitter).
- Executed the **Extract & Transform (ETL)** process using **Python** to parse raw JSON data, converting unstructured logs into analysis-ready formats.

### Winner – DS+X Hackathon 2025 (Best Overall, HackBU 1st)

Boston, MA

BU Spark! | Stack: Python, FastAPI, OpenAI API, OpenAlex API

Oct. 2025

- Engineered the backend for **RhettSearch**, an interactive research gamification platform driven by AI.
- Orchestrated a **RAG pipeline** that retrieves literature via **OpenAlex API** and synthesizes insights using **OpenAI API**.
- Designed structured **RESTful APIs** to parse complex JSON citation data, ensuring serialization for frontend integration.