Ashish Thomas

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EDUCATION

Northeastern University, Boston MA   *Sep. 2022 - Dec. 2025*
Candidate for Bachelor of Science in Computer Science with Concentration in AI
Honors: GPA: 3.7 | Dean's List

TECHNICAL SKILLS

Expertise: Full-Stack Development | Web Development | Machine Learning & AI
Languages: Python | Java | HTML | CSS | SQL | C | JavaScript
Frameworks: React | Node.js | Flask | Django | Express | Tensorflow | XGBoost
Data Tools: MySQL | MongoDB | Tableau | PostgreSQL | IBM DB2
Project Tools: Github | Trello | Jira | Miro | JUnit

WORK EXPERIENCE

Data Analytics and Engineering Co-op
Massachusetts Bay Transportation Authority (MBTA) - Boston, MA   *Jan. 2024 - June 2024*
- Created compelling data **visualizations** to analyze financial data from both the **MBTA** and **Keolis** rail companies to provide **data-driven insights** to 3 departments – **Procurement, Capital Planning,** and **Operations**.
- Utilized **automation testing frameworks** like **Selenium** in **Python** to ensure **efficient extraction** of the MBTA's rail station data logged across different websites, allowing for maintenance analysis and review.
- Rebuilt **ETL pipeline** with **Python, Pandas,** and **Crontab** in a server environment for transformation of over **4,000,000** inventory records from the MBTA Materials database, **improving daily data retrieval time** by **60%**.
- Led **20+ SQL workflow** executions with **Tableau Prep**, providing multiple departments with **clean accessible data** that matched their business use cases for inventory and purchase order analysis.

Software Developer
Oasis NEU - Boston, MA   *Sep. 2023 - Dec. 2023*
- Implemented a **4 month agile workflow** with a team of software developers to build a **web application** targeted at improving coffee shop wait times for online orders by leveraging **Grubhub's API** for order data**.**
- Improved **project lifecycle** time by **30%** by prioritizing goal planning in **Trello**, wireframe design in **Miro**, development in **Django**, testing user feedback, and streamlined **collaboration through Github**.
- Built the application back-end using **Python** and **Django**, mastering Django's **ORM** to efficiently display data from a **Postgres** database to populate a customer queue and busy-hours **heatmap**.
- Presented the **problem solving** and technical aspects of this project to a **panel** of **program directors** and other engineers, displaying the **complexity** and new **skills** learned through **teamwork.**

PERSONAL PROJECTS

Kicks Web Application – *React, Flask, MongoDB, AWS*
- Designed and deployed a **web application** for user tailored shoe recommendations, going from concept to implementation with wireframes converted to an engaging **UI/UX** experience with **React** and **Tailwind CSS.**
- Generated shoe recommendations through **Llama 3.1**, accessed via **Hugging Face's Inference API**, and stored recommendations and shoe metadata in **MongoDB** for quick retrieval and manipulation through **Express.**
- Engineered a **RESTful API microservice** with **Flask**, **Nginx**, and **Gunicorn** for real-time shoe price retrieval via web scraping, built for online shoe commerce platforms and hosted on **AWS EC2**.

Bullet Journal – *Java, JUnit, JavaFX, CSS*
- Designed a complex **task scheduler** application in **JavaFX** with features such as **user authentication**, schedule export, and task completion **metrics** across a week of user-logged events and tasks.
- Collaborated with a team of software engineers for development in accordance with **SOLID** principles, and focused on built-in testing with **JUnit 4** to ensure complete functionality.
- Styled the application with **Bootstrap CSS** for user friendly content interaction, and expanded **interface design** to accommodate feedback from **user testing**.