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 | AP Scholar Distinction
Courses: Object-Oriented Design, Algorithms and Data, Computer Systems

TECHNICAL SKILLS

Programming Languages: Python | Java | SQL | Typescript | HTML
Libraries and Frameworks: React | Flask | Django | Pandas | Sklearn | Tensorflow
Code Tools: Visual Studio | IntelliJ | JavaFX | JUnit | Eclipse | Git
Data Tools: MySQL | Tableau | PostgreSQL | IBM DB2

EXPERIENCE

Data Analytics and Engineering Co-op
Massachusetts Bay Transportation Authority - Boston, MA *Jan. 2024 - June. 2024*

- Rebuilt data pipeline with Python, Selenium, and Pandas for extraction and transformation of over 100,000 inventory records from the MBTA Materials database, eliminating manual data refresh that would take hours.
- Led data engineering efforts with maintenance of more than 10 Tableau Prep and SQL workflows to ensure data validity and built 4 new Tableau Server data sources with custom calculations and fields for downstream analysis.
- Created compelling data visualizations using Tableau Desktop to analyze financial and materials data from both the MBTA and third-party rail companies to provide data-driven insights to 3 distinct Authority departments.
- Developed a multiple time series forecasting model with XGBoost and MLForecast to predict future inventory for the upcoming fiscal year based on historical purchases over the last 20 years, accessible from Tableau Server.

Student Software Developer
Oasis NEU - Boston, MA *Sep. 2023 - Dec. 2023*

- Implemented an agile workflow with a team over 4 months to build a web application targeted at improving coffee shop wait times for online orders by leveraging data from Grubhub's API.
- Learned the software development project lifecycle by planning application goals in Trello, designing Miro wireframes, building out the application in Django, testing user feedback, and using Github for streamlined collaboration and communication between all developers on project direction.
- Built the application back-end using Python and Django, mastering Django's ORM to efficiently display data from a PostgreSQL database and showcase up to 20 customers in queue as well as a busy-hours heatmap.

PROJECTS

Spotify Playlist Recommender – *Python, Pandas/OS, Spotify Web API*

- Headed a project to provide song recommendations to 60,000 unique playlists by analyzing the relationships between the audio features of existing songs in the playlist, extracted using Spotify's Web API and Pandas.
- Trained and tuned Random Forest, SVM, and KNN Classifiers with Sklearn and hypertuned with GridSearchCV for 20% accuracy boost, testing model performance across real users and their personal playlists.

Personal Portfolio Site – *Typescript, React + NextJS, Tailwind CSS, Github*

- Designed a multi-page portfolio website with Typescript, React in the NextJS framework to display personal interests, education and tech experience, based on Miro wireframe designs created in the project's planning phase.
- Learned and used Tailwind to style applications with layouts and themes for a professional look, and built page animations with Framer Motion for a clean feeling user experience.

Smart Medicine Cabinet – *Python, IBM Watson, Arduino*

- Conducted an innovative project utilizing IBM Watson's Image Recognition technology to develop a smart medicine cabinet tailored for individuals with memory impairments and extensive daily medicine requirements.
- Integrated an Arudino-based LCD display that triggered warning messages based on touch sensor input and a user's face scan, enhancing usability and accessibility for users with specific health needs.