# Ashish Thomas

(914) 506-9982 | thomas.ash@northeastern.edu | [Github](Github) | Boston, MA

## 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

Software Engineering:          Java | C | Assembly | JUnit | JavaFX | Git
Web Development:               Typescript | HTML | CSS | React | Django | Tailwind
Machine Learning:             Python | Pandas | Numpy | Sklearn | Tensorflow | XGBoost
Data & Design:                MySQL | PostgreSQL | Tableau | Miro |

## EXPERIENCE

**Data Engineering Co-op**
*Massachusetts Bay Transportation Authority - Boston, MA*                              *Jan. 2024 - Present*
- Rebuilt existing data pipeline with Python | Selenium | Pandas for extraction and transformation of 100,000+ inventory records from the MBTA Materials database, eliminating manual data refresh that would take hours.
- Led data engineering with maintenance of Tableau Prep and SQL workflows to ensure data validity and build new Tableau Server data sources with custom calculations and fields for downstream analysis.
- Utilized Tableau Desktop to design insightful data visualizations of financial and materials data held by the MBTA and third party rail companies and shared these across the Authority with Tableau Server.
- Created a multiple time series forecasting model with XGBoost and MLForecast to predict future inventory for the upcoming fiscal year based on historical purchase orders over the last 20 years.

**Student Software Developer**
*Oasis NEU - Boston, MA*                                                                            *Sep. 2023 - Dec. 2023*
- Followed an agile workflow with a team over 4 months to build a web application targeted at improving coffee shop wait times for online orders based on data from Grubhub's API
- Built an application front-end with HTML, CSS based on designs made with Miro wireframes, and used Github for collaboration and clear communication between all developers on project direction
- Designed the application back-end with Python and Django to display 20 customers at a time from a PostgreSQL database by learning Django's custom ORM

## PROJECTS

**Spotify Playlist Recommender** – *Python, Pandas/OS, Spotify Web API*
- Led a project to understand connections between songs in a Spotify playlist based on song audio features - started by building a script to parse a JSON file of playlists and connect with Spotify's Web API to pull song attributes for each playlist's songs and visualize feature importances
- Trained and tuned Random Forest, SVM, and KNN Classifiers and hypertuned with GridSearchCV for 20% accuracy boost, and tested model performance across real users and their personal playlists.

**[Personal Portfolio Site](Personal Portfolio Site)** – *Typescript, React + NextJS, Tailwind CSS, Github*
- Designed a multi-page portfolio website with Javascript, React in NextJS to display personal interests, education and tech experience, all based on Miro wireframe designs created in the project's planning phase
- Learned and used Tailwind to style website 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*
- Experimented with IBM Watson's Image Recognition to create a medicine cabinet that connected to an Arduino based LCD display built for those with memory problems
- Designed a model able to provide authentication based on a Watson API call with a photo of a user's face so that the cabinet would know the user attempting to access the medicine and could warn of overdosage