

Belen Tesfaye

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EDUCATION

Northeastern University, Boston, MA

September 2021 - April 2025

Candidate for Bachelor of Science in Computer Science and Behavioral Neuroscience

- Khoury College of Computer Sciences

Activities: Alpha Phi Omega, Color Stack, Sisters in Solidarity

Relevant and Ongoing Course Work: Object-Oriented Design, Data-Based Design, Fundamentals of Computer Science I & II, Fundamentals of Software Engineering, Algorithms and Data Structure, Human Interactions

SKILLS

Programming Languages: Java, JavaScript/TypeScript, Python, C++, SQL, CSS, HTML

Frameworks/Libraries: ReactJS

AWS Services: AWS Lambda, DynamoDB, S3, and AWS CDK for Infrastructure as Code

Tools/Platform: Git, MongoDB, Figma (UI/UX), Linux

Other: Microsoft Office Suite, Amharic (native speaker)

ACADEMIC PROJECTS

CoveyTown Virtual Shop

[\(Figma\)](#) [\(Demo Video\)](#)

CS 4350 (Foundation to Software Engineering)

- Designed login and sign-up screens, including virtual shop and inventory UI.
- Implemented functional login and sign-up interfaces by developing APIs and integrating with backend services.
- Utilized sprite sheets and JSON files for CoveyTown pets and effects animation.
- **Utilized:** Typescript, React.js, Phaser, Texturepack, MongoDB, Version Control (Git), UI

HeritageHub

[\(Figma\)](#) [\(Prototype Source Code\)](#)

IS 4300 (Human-Computer Interaction) - ongoing

- Designed UI prototypes in Figma, gathering feedback via user surveys.
- Integrated generative AI for an AI chatbox to aid users with heritage queries.
- Applied custom CSS for aesthetic consistency and enhanced user experience.
- **Utilized:** Typescript, Javascript, React.js, Firebase, OpenAI, Version Control (Git), UI/UX
- **Real-time Collaboration Tool:**
 - Enhanced HeritageHub with a real-time collaboration tool, enabling multiple users to upload and edit files simultaneously.
 - **Utilized:** React, Axios, CSS, AWS AppSync, AWS Lambda, DynamoDB, S3, and AWS CDK

Reversi Game

[\(Source Code\)](#)

CS 3500 (Object Oriented Design)

- Created dynamic game interface in Java, using MVC architecture and OOP.
- Implemented human and AI player types with strategy patterns.
- Leveraged adapter and observer design patterns for modularity.
- **Utilized:** Java, GUI, Version Control (Git), Object-Oriented Design principles

EXPERIENCE

Upcoming Experience | Pearl River Technologies , Greenbelt, MD

June 2024 – Present (Expected)

Software Engineer Intern

- Contribute to unit testing of NASA's Flight Dynamics Facility (FDF) comprehensive Flight Dynamics system.
- Work with Java, TypeScript, Angular, and SpringBoot to support NASA's robotic missions.
- Collaborate with a mentor to gain real-world experience in software engineering at NASA.

D'Amore-McKim Business School – Entrepreneurship and Innovation, Remote (Boston, MA)

Research Assistant

April 2023 – March 2024

- Contributed to large-scale data set development for biotech startup products.
- Utilized established methodology and professor's guidance for data gathering, input, and cleaning.
- Employed Excel for efficient data encoding, ensuring accuracy and accessibility.

Beth Israel Deaconess Medical Central Location, Remote (Boston, MA)

Neuroimaging Research Assistant Co-op

June 2023 - September 2023

- Explored neuroimaging techniques in clinical research for insights into diseases like cerebral amyloid angiopathy, multiple sclerosis, cancer, and diabetes.
- Employed computer-based image analysis tools including python, ITK-SNAP, MATLAB, Monailabel, and 3D Slicer.