

Philip Bui

Boston, Massachusetts

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EDUCATION

Worcester Polytechnic Institute, B.S. in Computer Science, GPA 3.8/4.0, Dean's List

Aug 2021 - Dec 2023

Tufts University, M.S. in Human-Robot Interaction, GPA 3.8/4.0

Sep 2024 - May 2025

EXPERIENCE

Research Assistant, Human Interaction Lab, Tufts University

Jan 2025 - Present

- Developed and maintained GailBot, a PyPI tool for Jeffersonian transcription and conversational analysis.
- Performed extensive documentation and bug fixes for Linux and macOS deployments utilizing Docker.
- Supported 100+ researchers nationwide on a grant-backed project presented at UCLA conferences.

Full-Stack Software Engineer, enLabel

Jan 2024 - 2025

- Resolved 50+ bugs in undocumented legacy code & led UI system redesign, enhancing user experience.
- Architected a React TypeScript frontend with optimized ASP.NET API integration & data-driven interactions.
- Authored technical documentation & developed tools for end-to-end regression testing of C# ASP.NET APIs.

Website Developer, ProsperOn

Jun 2023 - Feb 2024

- Developed accessible financial simulation web pages with React Typescript, based on Figma designs.
- Designed and integrated RESTful APIs with Node.js and architected comprehensive uplifting of legacy code.

Operations Intern, Amazon

Jun - Aug 2023

- Developed an internal, mapping application, projected to reduce costs by >\$10k (95%) per trained employee.
- Built a Node.js server for data retrieval from Amazon's internal database, optimizing inventory tracking.
- Located and monitored >7,000 lost inventory items, reducing misplacement with data-driven software.

PROJECTS

LLM-Based Real-Time Captioning and Analysis Browser Extension, Tufts University

Jan 2025 - Present

- Built a real-time transcription system with Whisper for speech recognition and SpeechBrain for diarization.
- Integrated WebRTC and WebSockets for live audio streaming and processing in a browser environment.
- Optimized transcription and diarization with CUDA-accelerated PyTorch models for low-latency analysis.

Computer Vision-Guided Sphero Swarm Navigation Framework, Tufts University

Sep - Dec 2024

- Developed a swarm navigation system with probabilistic localization and mapping using computer vision.
- Built a scalable microservice architecture with multiple servers using BLE for collision-aware coordination.
- Conducted experiments comparing human preferences in manual vs. autonomous control of Sphero Bolts.

AI Platform for Low-Income Housing Development for City of Worcester, MA, WPI MQP

Aug - Dec 2023

- Designed and implemented AI-driven due diligence analysis, integrating GIS & open source data pipelines.
- Leveraged a PostgreSQL database and Node.js server, using RESTful express APIs for efficient data retrieval.

Nitrogen Cycle Public Outreach AR Game for Boys & Girls Club, WPI IQP

Oct 2022 - Mar 2023

- Led an 8-person team to develop an educational React AR.js game with an 86% approval rating from users.
- Facilitated learning for 100% of players on at least one core concept of nitrogen cycles in agriculture.

SKILLS

Programming:	TypeScript/JavaScript, Python, Java, C, C++, CSS, HTML, C#, SQL, PHP, Swift
Software Development:	React, Git, OpenCV, NumPy, ASP.NET, Node.js, Express.js, PostgreSQL, Telerik, IIS
Project Management:	Slack, GitHub Projects, Teams, Trello, Notion, Jira, Excel, Easy Redmine, Figma

OTHER EXPERIENCE

Community Events Coordinator, WPI Powerlifting

Mar 2023 - Dec 2023

Member, Upsilon Pi Epsilon (Computer Science Honor Society)

Jan 2023 - Dec 2023