Brennan Mahoney

bmm1@bu.edu | (774) 280-0845 | Portfolio Website | https://www.linkedin.com/in/brennan-mahoney | https://github.com/bmahoney1

Education

Boston University College of Engineering	Expected May 2025
Bachelor of Science in Computer Engineering (Concentration in Machine Learning)	GPA: 3.83/4.00, Dean's List: 6x

Relevant Coursework

Software Engineering, Cloud Computing, Deep Learning, Machine Learning, Reinforcement Learning, Programming for Engineers, Computer Organization, Operating Systems, Computational Linear Algebra, Probability-Statistics-Data Science, Algorithms, Logic Design

Skills

Software: Python, JavaScript, React, React Native, Node.js, SQL, REST APIs, HTML, CSS, C, C++, C#, Java, Arduino Code, Swift, Verilog
Tools: New Relic, Postman, SonarQube, Snyk, Jira, Confluence

Work Experience

Software Engineering Intern — May 2024 – May 2025
John Hancock
- Updated the mobile app's Start Session UI in React Native to ensure the ICPs start their shifts near the insured to help prevent future insurance fraud.
- Adjusted the query communication between CareGiver and the Salesforce Data Cloud, enabling secure access and updates to patient information with a "Legacy" claim status.
- Collaborated with the team to update the onboarding screens by removing the skip button to ensure complete setup, and researched error boundary implementation for smooth user transitions during crashes.
- Conducted QA testing for the new development implementations to ensure smooth functionality for the user.

Software Engineering Intern (Applications and IT Team) — May 2023 – August 2023, December 2023 – January 2024
EG America
- Applied HTML, CSS, and JavaScript for point of sales display/content and worked with git for source code management and collaboration.
- Deployed software using Tanium and conducted hardware imaging across computers.
- Utilized Python and .bat files for credit processor speed improvements and point of sales bugs.

Information Technology Specialist — January 2024 – May 2024
Boston University
- Worked with a team to fix software bugs and technical issues within classrooms.

Projects/Extra Curricular

WalletWatch Mobile App (Personal App)
- Developed a comprehensive expense tracking application using React Native, providing users with tools to analyze their personal finances.
- Implemented user authentication and data storage using AWS services (Cognito, DynamoDb, etc), ensuring scalable, secure and reliable access to user data.
- Integrated Plaid as a third party API to get transaction data securely from the linked user accounts to display the analysis and details of their transactions.

RedStone (Startup)
- Developed a web-based platform enabling users to design, test, and deploy custom algorithmic trading scripts for automated stock market transactions.
- Created user login and signup pages with secure authentication workflows, providing a smooth and secure user experience.
- Integrated Firebase Authentication to manage user accounts and securely store user data, ensuring scalability and reliability.

Audio Style Transfer via Neural Network (Team Leader)
- Collaborated on a team to implement a Convolutional Neural Network (CNN) setup with a VGG19 network for style transfer in audio spectrograms, bridging the gap between image processing and audio data.
- Employed machine learning models for audio synthesis, specifically using the WaveNet vocoder, to convert mel spectrograms back to audio, demonstrating proficiency in both audio analysis and synthesis.

HolyFit IOS App (Personal Developer App)
- Applied SwiftUI to write front-end user interface including the ability to make posts, comments and likes.
- Programmed back-end using Firebase that stores user data for usernames, passwords, and account information.

File System
- Implemented a file system in C for creating, mounting/unmounting, opening, closing, block reading/writing, deleting, and listing files.
- Designed data structures for managing file metadata, file descriptors, and a simulated file allocation table (FAT) within a block-based virtual disk environment.
- Implemented additional file system operations like file seek (`fs_lseek`), file truncation (`fs_truncate`), and retrieving file size (`fs_get_filesize`), enhancing file manipulation capabilities.

Pi Kappa Alpha Fraternity (Lead Recruitment Chairman)
- Led a group of people with the task of meeting, interviewing, and recruiting new members that would fit well within the fraternity.
- Have led and taken part in philanthropy fundraisers helping raise over $100,000 for inclusive foundations.