

Ethan Mulcahy

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Summary

I am a student at UMass Boston, studying computer science. I have over 2 years of experience in the field, including agile workflow, exposure to multithreading, TLV encoding/decoding, WebSockets, Git, Sqlite, QT Framework, Python, and React.

I'm an active proponent of open-source software. I like writing technical documentation and finding bugs. I prefer to reuse tested code as much as possible, hence I often start a project with researching available solutions.

Experience as Software Developer

Tomorrow.io

Software Engineer Intern 5/22 - Present

Project Involvement: Contributed to the development of several high-impact tools used by government agencies such as NOAA. Focused on building robust and efficient solutions in C++ (using Qt framework) and Python.

- [Arena](#)
- [Pathfinder](#)

Tool Development: Designed and implemented a variety of tools including:

- Parsers for code and binary data, facilitating efficient data handling and analysis.
- An Object-Relational Mapping (ORM) system, enhancing database interactions.
- A dynamic document generator, streamlining report creation processes.
- A generator for binary data, supporting intricate data management needs.
- A real-time data visualizer, enabling live monitoring and analysis of weather data.

Satellite Software Contribution: Played a pivotal role in the satellite software team. Developed a specialized parser for satellite telemetry data, significantly improving data retrieval and processing efficiency.

Agile Development: Gained comprehensive experience in Agile methodologies. Utilized Jira for effective project management, ensuring timely delivery of project components.

Version Control Proficiency: Skilled in using Git with GitHub for version control, demonstrating strong capabilities in code management and collaboration.

Learning and Certification: Completed an IT certification from Google via Coursera. Acquired valuable problem-solving skills and command over Unix commands, further enhancing technical proficiency.

Education

University of Massachusetts Boston - Boston, MA Computer Science, BSc; 2024.

Courses

Compilers (Current) Gaining insights into fundamental compiler design and implementation techniques.
[Homepage](#)

Applied Machine Learning (Current) Acquiring practical skills in machine learning applications and algorithms.
[Homepage](#)

Computer Graphics 2D, 3D Modeling, Three.js, WebGL, WebGPU, WebXR.
[Homepage](#)
[GitHub](#)

Introduction to Formal Languages Theoretical aspects of programming languages.
[Homepage](#)

Introduction to UI Design User Interface, Usability, Design Theory
[Certificate](#)

Extracurricular Involvement Participant in the [CS Club](#) at UMass Boston. Engaged in collaborative learning, group projects, and networking with peers and professionals in the field.

GitHub

music-visualizer-vr A VR web app music/sound visualizer with a scene that reacts to the music or sound. Very customizable with controls inspired by modular synthesis.
[Repository](#)
[Demo](#)

school-things-to-help-study A small collection of comprehensive yet condensed reference guides for some courses I took. Written in markdown, and converted to pdf using pandoc.
[Repository](#)

interdimensional-cable A silly web-scraper written in python, that creates a youtube playlist of obscure videos. Inspired by the tv show Rick and Morty.
[Repository](#)