

Andrew Boylan

andreweboylan@gmail.com | Boston, MA | 513-235-7254

<https://github.com/eastmountaincode/portfolio> | Available January 2024 - September 2024

EDUCATION

Master of Science, Computer Science

August 2021 – December 2024

Northeastern University, Boston, MA

- GPA: 3.8
- Selected coursework: Object-Oriented Design, Data Structures & Algorithms, Algorithms, Mobile App Development, Web Development, Natural Language Processing, Database Management Systems

Bachelor of Arts, Sociology

August 2019 – May 2021

University of Cincinnati, Cincinnati, OH

- GPA: 3.9 | Dean's List | Summa Cum Laude
- Selected coursework: Python & R, Statistics I, Calculus I, Intro To GIS

TECHNICAL KNOWLEDGE

- Languages: Python, R, C, Java, SQL, HTML, CSS, PHP, Javascript, Bash
- Tools & Frameworks: Linux, Git, Android Studio, Keras, Tableau, Node.js, Apache2, Cron, RAID

PROJECTS

Collaborative Collage (HTML, CSS, Javascript, Node.js, SQL)

August 2023

Personal Project

- Users can add/delete, send to front/back, move, resize images, and save a screenshot on this self-hosted site.
- Web sockets are utilized for real-time interaction with other users, creating a rich collaborative experience.

Virtual Free Little Library (HTML, CSS, Javascript, PHP)

July 2023

Personal Project

- Built a file-sharing website recreating the experience of a Free Little Library.
- Files are deleted when downloaded, introducing a novel social dynamic.
- Logging functionality for uploads and downloads (timestamp, IP address, file information, etc).

Geochat (Android Mobile App, Java)

October 2022

Northeastern University

- Built a location-based message board Android application with two other graduate students.
- Designed wireframes in Miro and conducted extensive planning before beginning to code.
- Integrated Google Maps API and Firebase RealTime Database.
- Adhered to MVC and DRY principles, designing with modularity in mind.

EXPERIENCE

Bioinformatics Co-op (Python, Linux)

January 2023 – present

Massachusetts General Hospital

- Developed a novel method for calculating local RMSD between two protein structures. Results were clustered with KNN and presented in interactive matplotlib graphs, allowing the team to choose several mutant proteins to create in the lab for further analysis. Mutant protein structures generated with AlphaFold.
- Created a non-trivial pipeline for recreating a DNA MSA based on an amino acid MSA and a collection of DNA transcriptomes. Conducted dN/dS analysis with results.
- Automated RNA-seq transcriptome assembly pipeline, resulting in massive productivity speed-up.

XN Rising Program (Python)

February 2022 – April 2022

Northeastern University / Pfizer

- Developed an accessible bibliographic reference parser in collaboration with four other students and a project sponsor from Pfizer using regex and open-source machine learning packages.

Research Assistant (Python)

January 2021 – August 2021

Digital Scholarship Center at University of Cincinnati

- Built text classifiers using scikit-learn, BERT, etc. to answer research questions.
- Produced usable, large-scale datasets via API pulls, web scraping, data cleaning, etc.
- Communicated weekly with a team leader to coordinate next steps for multiple simultaneous projects.