

EDUCATION

Appalachian State University
Bachelor in Computer Science; Cum Laude

Boone, North Carolina
Jun 2017 - May 2021

Appalachian State University
Masters in Computer Science (conc) in Data Science and Visualization;

Boone, North Carolina
Aug 2021 - May 2023

WORK EXPERIENCE

Appalachian State University
Research Assistant · Department of Geography and Planning

Boone, North Carolina / Remote
Jun 2023 - Present

- **Web Application for Visualizing Weather Data** (<https://climate.appstate.edu/widget/>): Developed a full-stack Node.js application that visualizes temperature, wind, pressure, and humidity readings from multiple weather stations across various mountain ranges. Implemented features to filter plotted data by start and end dates and enable conversion between different measurement systems.

Appalachian State University
Graduate Research Assistant · Department of Geography and Planning

Boone, North Carolina / Remote
Aug 2021 - May 2022

- **Climate Web Application:** Designed and implemented the full stack of a node.js application that provides a user interface for the FlexPart air trajectory model and various other scripts and programs on the climate server.
- **Noaa ETL Pipeline:** Developed an ETL pipeline for collecting hourly weather station data from the National Oceanic and Atmospheric Administration website. Implemented a scalable design pattern to simplify the addition of new stations. Cleaned and stored data in an SQLite database. Created comprehensive documentation and unit tests to facilitate maintenance by future assistants.
- **Ad-hoc Projects:** Weekly meetings with Professor to plan projects and give updates. Refactored and modified several scripts written by past Assistants.

Movement Labs
Intern · Data and Tech Team

Remote
Mar 2021 - Jul 2021

- **Campaign Reporting Web Application:** Fixed bugs spanning the front and back-end of python flask application before implementing a quality of life improvement based on a feature request.
- **Voter Data ETL Pipeline:** Designed unit tests using pytest for each stage of the ETL pipeline.

PROJECTS

ML Comment Moderator [Oct 2022 - Nov 2022] - <https://github.com/BrickGoat/reddit-comment-moderator>: Led a collaborative group project focused on developing machine learning models to predict comment deletions by reddit moderators. Proposed the project and organized the GitHub repository to facilitate effective teamwork and timely completion of tasks. Actively participated in various project phases, including webscraping, preprocessing, model training, and result evaluation. Employed Python, Pandas, Selenium, BeautifulSoup, Scikit-learn, and Jupyter Notebook for implementation.

Janitor bot [Jun 2020 - Aug 2020] - <https://github.com/Thomas-Le/janitor-bot>: Collaborated on a chat room management Discord bot. Demonstrated strong software engineering practices by incorporating continuous integration, conducting code reviews, and implementing unit testing. Utilized Python, pytest, and the Discord API for development.

Wuxia Web Scraper [May 2020 - Apr 2020] - <https://brickgoat.github.io/wuxia-scraper>: Developed a Python-based web scraper utilizing BeautifulSoup for extracting and saving web-novel chapters as text files on a local machine. Prepared comprehensive documentation outlining installation instructions and command line arguments.

PROGRAMMING SKILLS

Languages

Python, JavaScript, Java, C++, R

Web Tools

Node.js, Express.js, Vue.js, Flask, Selenium, Scrapy, BeautifulSoup

Technologies

Linux, Git, SQL, MongoDB, Pytest

Data Tools

Tableau, Matplotlib, Pandas, Numpy, Scikit-learn, d3.js