Jonathan Trailor

EDUCATION

Khoury College of CS, Northeastern University   January 2021 – August 2023
Candidate for Master's in Computer Science

Relevant coursework: Object Oriented Design, Programming Fundamentals, Data Structures and Algorithms, Graduate Algorithms, Network Fundamentals, Database Design

Providence College   August 2014 – May 2018
Bachelor of Arts in Economics, Political Science

Universidad Carlos III de Madrid (UC3M)   August – December 2016
Study Abroad in Economics

TECHNICAL SKILLS

Programming languages: C, Java, JS, React, Python, R, SQL, VBA
Technical tools: PowerBI, Qlik Sense, Jenkins, Ansible Tower, PCF, JIRA, Confluence, GitLab, Wireshark
Formal certificates: Providence College School of Business - Data Analytics Certificate

PROJECTS

Mastermind Game – Python, GUI, MVC, OOD
– Designed and implemented a playable Mastermind in Python using OOD principles and the MVC design pattern.
– Utilized Python's Turtle interface as a GUI, allowing the user to operate the game via mouse-click event handling.

Raw Sockets – Python, Networking, Sockets, Wireshark
– Created a tool that can retrieve web pages from the data link layer through sending and receiving raw sockets.
– Developed custom implementations of the HTTP, TCP, IP, Ethernet, and ARP protocols.

MyBar GUI – Java, GUI (AWT/Swing), MySQL, MVC, OOD
– Built an application that allows a user to enter ingredients and the tool returns relevant cocktails.
– Improved tool though MySQL integration for data; GUI allows for the direct entry of items into the database.

Web Scraper – Python, Sockets
– Developed a web scraper that parses a simulation social media site for randomly placed codes.
– Utilizes sockets for connectivity, has custom parsing functionality and handles varying HTTP status codes.

PROFESSIONAL EXPERIENCE

Northeastern University, Boston, MA   September 2022 – December 2022
Teaching Assistant – CS5001 Intensive Foundations of CS
– Lead weekly labs with 30 students that implement concepts learned in the preceding lecture. Concepts include solving problems utilizing common programming features, algorithm analysis and object-oriented design.
– Develop custom materials for one-on-one tutoring sessions to help students understand difficult concepts and to increase their curiosity in computer science.

Kessel Run (USAF AFLCMC/HBB), Hanscom AFB, MA   June 2022 – September 2022
Software Engineer Intern
– Developed a calculation micro-service with Java and Spring Boot for the USAF.
– Optimized CI/CD pipeline in GitLab utilizing directed acyclic graphs which led to a 50% reduction in runtime.
– Assisted with the first integration of the micro-service to a client app via API; client app in active use by USAF.
– Integrated library to track end point usage metrics for the purpose of user driven development.

The TJX Companies, Inc., Marlborough, MA   January 2022 – June 2022
Infrastructure Engineer Intern
– Completed TJX Automation Course demonstrating competencies is DevOps principles, Linux fundamentals and automation technologies with Jenkins, Ansible and Ansible Tower.
– Automated multiple start and stop procedures for various application teams utilizing Ansible and Ansible Tower. Enabled non-technical users to quickly and safely start and stop their applications and supporting infrastructure.
– Assisted in developing Packer and Terraform files for a PoV; new technologies would allow for automated image creation and its provisioning across TJX's infrastructure.