

Max Guthrie

Computer science student seeking software engineering internship

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Portfolio: <https://mguthrie45.github.io/Portfolio-Website/>

Leadership & Involvement

Director of Technology at Engineering-Consulting Collaborative

06/2020 – 06/2021

Penn State professional organization dedicated to improving problem-solving, leadership, and consulting skills. E-CC offers pro bono consulting to local startups and seeks to help its members by offering resume and networking workshops.

- Made changes to HTML/CSS code for the organization's website.
- Lead a team of associates to develop a Flask web application with weekly meetings.
- Helped with hosting and writing in-house case competitions.
- Conducted several interviews for incoming members.

Member of PSU Association for Computing Machinery

01/2021 – present

- Explores concepts with workshops and assignments.
- Technical Interview preparation sessions.
- Received introduction to web frameworks and learned Flask.

Team Member at Whole Foods

05/2021 – 08/2021

- Prepared food for customers, stressed quality customer service.
- Cleaned and sanitized stations at close.
- Required versatility for sudden changes in tasks and collaboration among team members.

Projects

Stock Sentiment Analyzer - Python 3 (Pandas, BS4)

<https://github.com/mguthrie45/Stock-Sentiment-Analyzer>

Tracks news based sentiment for user's watchlist. Presents warning notifications and graph functionality with Tkinter GUI.

Concepts: web scraping, Pandas, threading, object-oriented GUI design.

Cocktail Recipe App - ReactJS

<https://github.com/mguthrie45/CocktailDB-Recipe-Browser>

React app for browsing drink recipes of different category and nationality from TheCocktailDB API.

Concepts: requests, asynchronous JS, React concepts, filtering tables.

Interactive Air Quality Map - JavaScript (D3 JS), HTML/CSS, Flask

<https://github.com/mguthrie45/Interactive-Open-AQ-Map>

Interactive map and table of US air quality data from OpenAQ API.

Concepts: requests, JSON parsing, Flask backend, searching & filtering tables.

Search Engine - Python3, Flask, HTML/CSS

<https://github.com/mguthrie45/Interactive-Open-AQ-Map>

Web crawler discovers new addresses and grows SQLite database for improved searching.

Concepts: Databases, web crawlers.

Education

B.S. Computer Science, Economics minor

Pennsylvania State University GPA: 3.98

Graduation: 05/2023

Programming Languages

- Python
- JavaScript & React, TypeScript
- Java & JDBC
- C
- HTML & CSS

Technical Skills

- Data structures & algorithms
- Basic SQL experience (JDBC and SQLite3)
- Systems programming & basic socket programming
- Shell (UNIX, Windows) & GIT
- Basic modeling with Tensorflow & SKLearn
- Calculus (including multivariable), linear algebra, probability, scientific statistics

Soft Skills

Leadership, optimism, presentation & public speaking, intellectual curiosity, open mindedness

Sorting Algorithm Visualizer - JavaScript, HTML/CSS

<https://github.com/mguthrie45/Sorting-Algorithm-Visualization>

Responsive application that animates sort-in-place algorithms.

Digit Drawing Classifier - Python 3 (Tensorflow)

<https://github.com/mguthrie45/Digit-Drawing-Classifier>

Neural network classifies drawn numbers on a 28x28 grid.

Concepts: Neural networks & NN modeling with Tensorflow.

JBOD Interface Final Project (CMPSC311) - C

<https://github.com/mguthrie45/Sudoku-Solver>

Read & write interface for hard disks equipped with caching and remote calls using network sockets.

Concepts: pointers, structs, system calls, caching, socket programming, makefile, unit testing.

Room Scheduler Final Project (CMPSC221) - Java, JDBC

<https://github.com/mguthrie45/Sudoku-Solver>

College faculty room scheduling software with Apache Derby database. GUI was made with JComponents.

Concepts: OOP, SQL & JDBC, Java desktop applications.