

Max Guthrie

Computer science student seeking a software internship

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LEADERSHIP & INVOLVEMENT

Director of Technology

[Engineering-Consulting Collaborative](#) 06/2020 - Ongoing
University Park, State College, PA

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 network.

- Making changes and HTML/CSS code for the organization's website.
- Leading a team of associates to develop a Flask web application to organize team members for the organization's events.
- Help with hosting in-house case competitions.

Member

[AlgoPSU](#) 01/2021 - Ongoing University Park, State College, PA

An organization devoted to preparing students for technical coding interviews. Topics discussed were data structures, time & space complexity, and coding interview problems.

Member

[Penn State Investment Association \(PSIA\)](#) 01/2021 - Ongoing
University Park, State College, PA

A student-led hedge fund with over \$7 Million in assets and numerous alumni investors.

- Discusses investment strategies for various sectors.
- Financial indicators and portfolio risk management.
- Consistently achieves market beating returns.

PERSONAL PROJECTS

Stock Market Sentiment

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

Python-based software that scrapes the web for news pertaining to a ticker on the user's watchlist. A sentiment analyzer is applied to parsed news content to find the positive-negative score of a certain stock, and users are notified in the program and by email when a stock significantly changes in sentiment.

- Used technologies: Python 3, BeautifulSoup4, Pandas, Tkinter, NLTK, threading, SMTP requests.

Python Search Engine

<https://github.com/mguthrie45/Search-Engine-Simulation>

A rudimentary search engine built with Python 3. Flask was used for the user interface.

- Involved three main components: SQLite database for storing site content and keywords, the Flask based GUI, and the crawler, which was responsible for finding new websites.
- This project taught me a lot about how search engines gather info from the web, how search results are found, and important concepts surrounding SEO optimization.

Sorting Algorithm Visualizer

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

Full-stack, responsive application with Object-oriented back end JS. Made with an easy-to-understand UI that presents smooth animations for famous sorting algorithms.

- Used technologies: JavaScript, HTML, CSS

Top-Down Survival Game

<https://github.com/mguthrie45/Survival-Bullet-Hell>

A JavaScript game where the player moves within the frame to collect upgrades and shoot enemy objects that bounce around. Upgrades improve the player object's abilities. The longer the player survives and the more upgrades collected, the higher the score. A boss wave spawns periodically, and collision physics for both the player and enemies and objects and walls are existent.

EDUCATION

B.S. Computer Science, Economics Minor
[Pennsylvania State University](#) GPA: 3.98

08/2019 - 05/2023 State College, PA

PROGRAMMING LANGUAGES

Python



HTML & CSS



JavaScript



Java



C



SKILLS

GIT

Shell

Bootstrap

Tensorflow & SKL (Beginner)

SQL (Basic Experience)

SQLite

Data Structures & Algorithms

Verilog & Xilinx Vivado

MIPS ISA & CPU Design

VMWare

Systems Programming (C)

Flask

JDBC & Apache Derby

HONORS & AWARDS

 Penn State Freshman Award:

award given to the highest academic achievers in PSU's freshman class

 Cum Laude Society

Given to the highest academic achievers graduating high school.

 Mu Alpha Theta

Awarded for exceptional use of math at 2019 PRSEF science fair.