GitHub
Personal Website

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EDUCATION

Buffalo, NY **University at Buffalo** **Aug 2018 – May 2022**
- **Major:** Computer Science, B.S. **| GPA:** 3.88/4.0 **| Honors:** Dean's List
- **Relevant Coursework:** Software Engineering, Algorithms and Complexity, Data Structures, Discrete Structures, Systems Programming (Distributed Systems), Computer Organization, Object Oriented Programming (OOP)

EXPERIENCE

Research, Space Net Simulation **University at Buffalo** **Jan 2021 – Present**
- Improved simulation data collection by 100 times by implementing parallelization in C++ with Windows executables
- Led a team of researchers to integrate version control (using Git) with various simulation models
- Only undergraduate CS student selected to work on this research of capturing space debris in orbit with nets

Software Engineering Team **University at Buffalo** **Aug 2020 – Dec 2020**
- Leveraged knowledge with full stack web development to integrate a user nutrition tracking system with real-time persistent data storage and deletions
- Worked with a technical project manager and team of four, while utilizing Git and the Agile(Scrum) software life-cycle model for systematic software development and testing

Teaching Assistant **University at Buffalo** **Jan 2020 – May 2020**
- Led groups of students through CS fundamentals and Python projects using quantitative analysis
- Hosted lab sections and office hours as well as proctored exams

Data Coordinator, Intern **Town of Somers** **May 2019 – Aug 2019**
- Improved data storage by utilizing a sorting algorithm to query site users based upon various data points
- Implemented various user flags to store user info in CSV files with Python

PROJECTS

View More Projects *(personal website to view more projects and info)*

PicToCartoon: Uses A.I. to Convert a Picture into a Cartoon Drawing | View *(please be patient w/ page load)*
- Utilized TensorFlow 2 Neural Networks to create an app that detects common objects, matches an object to a cartoon counterpart, and provides an animated cartoon sketch
- Incorporated caching to implement an efficient query system for QuickDraw Bin files and limit GET requests
- Developed an algorithm to transform and normalize stroke coordinates to be drawn onto an HTML canvas
- Built With: Python, React, Flask, OpenCV, TensorFlow 2 Object Detection API, QuickDraw API

Health and Fitness Tracker Dynamic Web App | View *(please be patient w/ page load)*
- Incorporated persistent data storage and user accounts to keep track of a users' nutrition and health, allow a user to share fitness tips and feats, calculate various body-health measurements, and more
- Integrated SQLAlchemy and developed a database schema to create an SQLite relational database
- Built With: Python, Flask, Vue, JavaScript, HTML5/CSS3, Heroku, AJAX, SQLite, Git with an Agile (scrum) team

Sorting Visualizer | View
- Implemented Quick sort, Bubble sort, Selection sort and Insertion sort
- Developed an algorithm with JavaScript Async/Await and Promises to control the speed of the visualization
- Built With: JavaScript, jQuery, Bootstrap, HTML5/CSS3

Audio Visualizer | View
- Designed an algorithm with a Fourier transform on SoundCloud audio slices to create a 2D visualizer that manipulates shape radius, depth, and location
- Implemented a URL and/or keyword search by sending GET requests and queries to the SoundCloud API
- Built With: AJAX, SoundCloud API, Web Audio API, JavaScript, jQuery, Bootstrap, HTML5/CSS3

Dynamic Memory Allocator | View on GitHub
- Utilized Multi-pool allocation to efficiently run single-threaded Linux applications – Malloc(), Calloc(), Realloc(), Free()
- Built With: C and Makefile

SKILLS

proficient: Python, Scala, JavaScript, React, jQuery, HTML5/CSS3, Git, Flask, Agile *familiar*: C, C++, MySQL, Vue