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BRENNEN GREEN

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EDUCATION

Lexington, KY **University of Kentucky** **Expected: May 2023**

- **Major:** Computer Science, Mathematics B.S. (GPA: 3.87)
- **Key Courses:** Linear Algebra, Calculus 1-4, Engineering Programming, Physics I, Programming in C, Oceanography, Frontiers in Artificial Intelligence, Algorithms and Data Structures

EMPLOYMENT

Controller Integration Engineering Co-op **Intel Corporation** **Oct. 2020 – Present**

- Wrote automated test simulations for the Simics platform in C and Python
- Debugged and validated various processor configurations simulated via FPGA
- Mastered the Linux kernel to be able to debug, validate, and test processor firmware

Biomedical Imaging Lab Assistant **University of Kentucky** **Mar. 2020 – Oct. 2020**

- Assisted with optimization of imaging device that renders real-time model of patient blood flow / hemodynamics
- Optimized computation time of imaging device by over 300% using CUDA GPU acceleration in MATLAB
- Developed a LSTM recurrent neural network in Pytorch that mapped cerebral blood flow to intercranial pressure

Software Engineer **University of Kentucky** **May 2019 – July 2020**

Department of Communication (comm.uky.edu)

- Improved faculty data comprehension by creating a data visualization web app in PHP, JavaScript, and SQL
- Automated faculty job search process by using Python to parse new applicants, saving 2 hours daily
- Integrated Docker into applications department wide while co-leading a project to revitalize department DevOps
- Integrated new code review automation and management system using version control and GitLab

EXTRA-CURRICULAR

Embedded Systems Team **UK Solar Car Team** **Aug 2019 – Present**

- Helped with development of the embedded systems within the car such as RTOS, sensors, and microprocessors
- Contributed to the development of the real-time operating system
- Improved reliability of steering wheel by designing detachable throttle/brake daughter boards using Eagle PCB

Bioinformatics Research Assistant **University of Kentucky** **Aug 2018 – Dec. 2018**

- Reduced dependency on legacy-based platforms by integrating Linux Fedora 28 into the lab infrastructure
- Spearheaded the development of a python implementation of the open source software "BioFabric"
- Used Python to analyze sample genome datasets and visualize them using BioFabric

PERSONAL PROJECTS

Mandelbrot Fractals in OpenGL: https://www.brennengreen.dev/blog/posts/1/

- Created interactive visualizations of the Mandelbrot Set fractal in the core profile of OpenGL
- Used OpenGL Shading Language (GLSL) to create efficient and aesthetically pleasing shaders
- Used C++ to create an interactive program that allowed the user to explore the fractal in real time
- Utilized: C++, GLSL, OpenGL, Shader Development, Graphics Pipeline, Simulation

GoList (Craigslist Web Scraper in Go): https://github.com/brennengreen/golist

- Implemented a web scraper that scrapes posting data from a craigslist category
- Used Golang's PostgreSQL implementation to categorize all postings in a SQL database
- Maintained an active server for utilizing the web scraper and database using Heroku
- Utilized: Algorithms, SQL / PostgreSQL, Databases, Heroku, Twilio, Go, and Web Scraping

Ditto (Discord Media Bot Written in Python): https://github.com/ditto-dev-team/ditto

- Used Python to design the backend to safely access the bot's file structure and store/access media files
- Used Heroku to properly sense when the bot is in use as to save time and money when hosting the bot
- Utilized: UNIX File System, Python, Heroku, Git Version Control, Project Management