

EDUCATION

Lexington, KY **University of Kentucky** **Aug. 2019 – Dec. 2022**

- **Major:** Materials Science and Engineering, B.S. (GPA: 4.0)
- **Coursework:** Programming in C/C++ and Java, Chemistry 1, *Spring 2020*: Physics 1 and Materials Science

SKILLS

- **Technical:** Nanoindentation, Wet Lab, JavaScript, Python, PHP, Linux, MacOS, Go / GoLang, HTML / CSS, Git, Java, Data Visualization, Data Pipelines, Systems Design, C / C++, Web Design Fundamentals

EMPLOYMENT

Software Engineer **University of Kentucky** **May 2019 – Oct. 2019**

Department of Communication (comm.uky.edu)

- Improved faculty data comprehension by creating a data visualization web app in PHP, JavaScript and SQL
- Created stunning visualizations in Tableau to demonstrate the power of the software to staff members
- Automated 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 dev ops
- Leveraged Knowledge of MVC Architecture, Web Debugging, Docker, Dev Ops

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
- Leveraged Knowledge of System Design, Data Science, Debugging, and Visualization.

EXTRA-CURRICULAR

UK Solar Car Team – Electrical Team Member:

- Revision and design of important circuit boards using Eagle PCB Design software
- Researched Li-Ion battery design and chemistry to help the team make the best decision to power our car
- **Future projects:** Designing the electrical system of our new car, Gato del Sol VII. Designing a sustainable solar powered trailer to pull our car to events

Energy Conversion/Storage Research Lab (Li-ion / Na-ion Batteries):

Supervisor: Dr. Y.T. Cheng

- Construction of li-ion batteries from raw materials
- Use of lab equipment/methods such as nanoindentation to judge mechanical properties of possible electrolytes
- Use of programming abilities to assist with material characterization and lab experiments
- Currently shadowing a graduate student researching mechanical properties of Sodium Ion Battery Cells

PERSONAL SOFTWARE PROJECTS

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
- Used Twilio to notify me whenever an item is posted for less than the average price of similar items
- Utilized: Algorithms, SQL / PostgreSQL, Databases, Heroku, Twilio, Go / GoLang, 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
- Administrated the version control over the bot to promote proper and safe collaboration amongst the team
- Utilized: UNIX File System, Python, Heroku, Git Version Control, Project Management