Christopher Geiger

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Education

University of Connecticut — Storrs, CT
Major: Computer Science and Engineering, Minor: Mathematics
Specialization: Theory and Algorithms
McNair Scholar, Honors Student, LSAMP Member
GPA: 3.64 — *Aug. 2017 – May 2021*

Relevant Experience

Connecticut National Guard (Senior Design Project) — Remote
Cybersecurity — *August 2020 - May 2021*

- **Cyber Range**: Helped create a new Cyber Range in Connecticut by designing training scenarios for new National Guard recruits. Scenarios (such as ransomware attacks and website defacement) were deployed using VMware.

Quickwits — Remote
Project — *2021*

- **Full Stack Experience**: Developed a modern full stack web application, built with **GraphQL**, **Typescript**, **PostgreSQL**, and **React**, among others. The application is a Quiplash clone, called Quickwits. (Github)

Co-author: RESIST
Iris Recognition and Machine Learning Research — *June 2020 - May 2021*

- **RESIST**: Co-author of an academic paper which examines the vulnerability of iris recognition devices by using adversarial machine learning networks to produce replica iris images from leaked template data. (View)

Computational Geometry Design Project — Remote
Team Leader and Manager — *August 2020 - December 2020*

- **Project Management**: Led a team of programmers to develop multiple computational geometry projects over the course of the semester, including a final project on the art gallery problem. The final project was deployed using an **Amazon Lambda** instance. The backend was written in **Python**, and the frontend was written using **P5.js**. (View)

Plex — Remote
Database Engineering — *May 2019 - Aug. 2019*

- **Tidal Music Streaming Integration**: Created and maintained a new infrastructure for ingesting music data from Tidal streaming service via **FTP**.
- **MongoDB/Mongoose**: Implemented and tracked regular Tidal ingestions via the use of various **Mongoose** schemas, as well as **Redis** key-value stores.
- **NodeJS**: Contributed to a very large-scale **NodeJS** application, which was written entirely in enterprise-grade code, with strict adherence to best practices such as **Rabbitmq** for microservice communication and Modern **ES6** standard practices, enforced by **ESLint**.
- **JSDoc**: Made frequent use of **JSDoc** to provide well-documented and easily maintanable code, as well as to type define new datastructures and functions created, even though this was not yet standard practice at Plex.

University of Connecticut — Storrs, CT
Geoscience Research — *October 2019 - May 2020*

- **Development of Climate Model Coupler Interface**: Created tools (e.g. **Makefiles**, **bash scripts**) for the NCAR CESM project. The project is specific to the Linux systems on UCAR Cheyenne. (Github)

Yale Center for Research Computing — New Haven, CT
Web Development and Scripting — *May 2018 - Aug. 2018*

- **Linux Systems**: Designed various scripts which aggregate user data to make predictions about wait times.
- **Backend/Frontend Web Development**: Built web pages for users to visualize usage data (such as disk usage and jobs running under their user group) using **Python**, **Flask**, and **Jinja**. This data was parsed from **SLURM**, and data aggregation was done with **Pandas**.