

Career Profile

Experienced developer interested in security, development, and innovation.

Work Experience

Security Research Student

January - April 2023

Blackberry

- Built a platform for fuzzing of Blackberry products.
- Created a custom fuzz target for a Blackberry product.
- Researched security-related topics including Spectre and post-quantum cryptography.
- Contributed to a ongoing project for a security-related patent.
- Researched automatic fuzz target generation methods.

Full Stack Developer

April - August 2022

Curvegrid

- Investigated, tested, and implemented solutions in a highly concurrent blockchain application.
- Collaborated extensively with colleagues to redesign UI components.
- Updated features and refactored tests to clean up the codebase.
- Investigated, diagnosed, and solved a long-term memory leak regarding websockets.
- Improved the codebase through many tests, go linter improvements, and code cleanup.
- Returned and am currently working part time.

Systems Developer

April - August 2021

RAMP

- Designed, developed and implemented an employee HR system.
- Created a new system in Angular and Express and deployed it to a new server.
- Created tools to bridge the system with existing Dynamics and PayWeb applications.
- Wrote a script to import the existing timesheet data into the new system.

Software Tester and Documentation Specialist

July - August 2020

Centre for Community Mapping

- Co-managed the automated testing suite for the company's PHP code base.
- Created documentation for the customer API, increasing customer efficiency and accuracy.
- Refined the automated testing system of the project, adding many major improvements.

Developer

October - January 2020

Centre for Community Mapping

- Created an application in VBA to enable data transfer from Excel to the COMAP database.
- Developed a similar application in Google Sheets using the project's HTTP API.
- Tested and used the project's API to help implement a data browser application.

Achievements and Projects

DMOJ Modern Online Judge

January 2021 - Present

- Moderated the site, managing users and responding to user emails.
- Prepared monthly programming contests for the site, and supervised other contests.
- Approved problems for contests and helped out with data generation.
- Contributed to the source code, including an ongoing patch to add a new kernel module.

MAPS Radio Database

September - December 2021

- Built a Radio Database Management System, leveraging Django Admin.
- Imported existing data to smoothen the transition to the new system.
- Implemented a webhook to link the administrative system to the main site.
- Imported and parsed geographical data to import timezones.

Hack The North 2020++

January 2021

- Created an end-to-end encrypted file storage application with Next.js and Flask.
- Used Sia, a blockchain-powered distributed storage network, to store files.
- Using industry-standard cryptography, implemented encryption in JavaScript.
- Wrote a REST API to communicate with the backend.

Supermoms Website Competition

June 2020

- Winner of a website-building competition for a small company.
- Created a fully-functional website in both English and Simplified Chinese in several weeks.
- Integrated the website with Stripe to provide a complete online payment system.

Keenan Gugeler

Developer



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github.com/Riolku

Proficient In:

- AFL
- C/C++
- Docker
- Flask
- Git
- Go
- Linux
- NGINX
- Python
- Rust
- SQL

Experienced In:

- Assembly
- Django
- Fuzzing
- HTML
- Javascript

Knowledgeable In:

- Angular
- CSS
- Express
- Material Design
- Vue.js

Hobbies



Learning Japanese



Reading



Programming Competitions

Education

University of Waterloo

Honours Computer Science
September 2020 - Present