Mark **Keller**

Software Engineer

contact@markkeller.dev | www.markkeller.dev | keller00 | markokeller

Education

University of Waterloo
Waterloo, ON, Canada

Honours Computer Science - Co-operative Program
Sept. 2014 - Aug. 2019

Experience

Snowflake
San Mateo, CA, USA

Software Engineering Intern
Jan. 2019 - Apr. 2019

- Implemented an automated incident reporting system using Python and Java
- Designed and developed API endpoints with payload length limiting and throttling security measures
- Added Merge Into and Copy Into custom SQLAlchemy commands to Snowflake's library
- Improved stability and performance of tens of thousands of lines of code written in Node.js, Python and Java

Nvidia
Santa Clara, CA, USA

Cloud Platform Software Engineer
May 2018 - Aug. 2018

- Migrated Nvidia GPU Cloud's CLI from Python 2 to Python 3 while maintaining backwards compatibility
- Implemented tab completion, supporting fuzzy completion of dynamic ID numbers
- Upgraded the Jenkins distribution pipelines of the CLI's Python package and OS specific binaries
- Reconfigured the CLI's Tox configurations to compile Sphinx documentation locally
- Mentored less experienced interns by guiding them towards relevant resources

Projects

Java to x86 Compiler
Scala

- Participated in the making of lexing, parsing and code generation of JOOS 1W (a subset of Java 1.3) to x86 compiler
- Developed static analysis component of compiler to check for unreachable statements, uninitalized variables and missing return statements through all execution paths
- Implemented memory layout of classes with inheritance/interfaces and class casting feature

Regress
Python

- Designed an open-source testing framework
- Integrated project with Azure Pipelines as continuous integration and continous delivery system
- Maintained project on Github, following proper open-source software development principles
- Packaged Python code for distribution on pip

Operating System 161 Extensions
C

- Supported concurrency, memory management and process separation
- Developed locks and semaphores to prevent deadlocks
- Implemented virtual addressing and address translations with paging
- Managed process address spaces and execv system call

Skills

Languages Python, Scala, C, C++, Java, LaTeX, Bash, Javascript, Node.js
Softwares Linux, Git, vim, GDB, PDB, Twisted, WebRTC, systemd, rsyslog, subversion