Tyler Roberts

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Summary

Enthusiastic computer engineer with 4+ years experience in software development and design. Extensive work with Python, including the improvement of an application used in cutting edge scientific research at the University of Wisconsin - Madison, the development of an application that efficiently crawled through Micron's documentation and translated language syntax, and broad work with the SciPy package within academia. Considerable development with C and C++ in embedded systems and lower level programming, as well as exposure to computer architecture and circuit design. Very interested in systems and how they all interact with one another.

Computer Skills - Python, C++, C, Linux, Bash, Verilog, SystemVerilog, Matlab, Java, Git.

Experience

IBM Corporation, Yorktown Heights, NY — July 2017 - Present

Software Engineer, Watson Health Cloud

- Increased test case coverage from 30% to 90% using Python unit tests since joining the team.
- Developed Python application on another team that moved their locally stored data and user accounts to Bluemix, IBM's cloud platform as a service.
- Designed and engineered a web application from the ground up using HTML, CSS, Angular, and Bootstrap. Responsible for the front-end, including page navigation using a MVC pattern. Worked closely with two others as they developed the other layers of the application.
- Used Docker to rigorously test the deployment of the web application onto a server.
- *Tools & Technologies: Python (2.7), Docker, HTML, Angular, Javascript, Linux, MacOS.*

UW-Madison Plasma Physics Dept., Madison, WI — Jan. 2016 - May 2017

Scientific Programmer

- Inherited former Ph.D. candidate's Python application, and enhanced it to communicate with additional instrumentation added to the experiment.
- Wrote new code to parse binary data recorded from experiments, and store it to a database.
- Wrote a GUI using tkinter to improve productivity for the team as they used the application for their research.
- Collaborated extensively with scientists and professors to deliver a fully functional application for their research.
- Organized and taught Python tutorials for graduate students, professors, and scientists unfamiliar with Python and OOP.
- *Tools & Technologies: Python (2.7), C++, Matlab, MacOS, Linux.*

Intel Corporation, Hillsboro, OR — May 2016 - Aug. 2016

Pre-Silicon Validation Engineering Intern

- Improved debug tool by creating my own checkers and algorithms that were used to validate the SoC architecture. My improvements were able to detect and isolate several bugs found within the design.
- Developed Python modules in large code base for validation teams to share key architectural, test and debug knowledge.
- Enhanced a validation tool by developing features that created easy debug for members of the design team. Managed to increase the productivity of the developers and validators as well as save time for the company.
- Collaborated with several teams within DDG to determine the best way to provide feedback in the debugging process.
- *Tools & Technologies: Python (3.4), Perl, SystemVerilog, OVM/UVM, Unix.*

Micron Technology, Longmont, CO — May 2015 - Aug. 2015

Product Validation Engineering Intern

- Wrote python program that manipulated Micron's script documentation to convert Sphinx docs to Pydoc docs. Application allowed user to browse through documentation, and translated the pages in real time.
- Tested solid state drives to ensure they performed correctly when given certain commands.
- Worked with Micron's test automation platform, and used FIO, an I/O benchmarking tool, for testing the SSDs.
- *Tools & Technologies: Python (2.7), Bash, Linux, Git, JIRA, Jenkins.*

Education

B.S. Computer Engineering, Computer Science, & Mathematics with Physics Certificate (minor).
University of Wisconsin - Madison