Timothy Gerstel

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Work Experience

ROCKET SOFTWARE – Waltham, MA June 2019- Present

Software Engineer I

- Full stack enterprise development on IBM z Series Mainframes and participant of multiple Agile teams developing separate products
- Maintain multiple open-source web servers which implement NodeJS, TypeScript, Angular, React, C, Java, Python, JCL, and shell. Integrated a variety of consumable REST APIs and microservices, as well as enhancements to the server backends/frameworks.
- Design REST API for administrators which enables the querying of server related information such as log files, log levels, environment details, and server config. Implemented in both NodeJS and C.
- Design and implement SSO solution using JWTs
- Contribute automation to test beds via Selenium Web for Python, experience with screen scraping, unit testing and CI/CD pipelines such as Jenkins. Experience with L3 customer support cases for product components via JIRA.
- Maintain multiple open-source Angular and React applications

ROCKET SOFTWARE – Waltham, MA July 2018- December 2018

Software Engineering Intern

- Developed a solution for reverse proxy gateway compatibility between a Spring Boot API and NodeJS/TypeScript web server.
- Designed the necessary functions for the consumption, cataloging, and display of Swagger API documentation.
- Conducted research on the improvement of various architectural properties of REST APIs.

Skills

Technical: Java, C, C++, Objective-C, Python, PHP, JavaScript, TypeScript, React, Angular, Node.js, MySQL, databases, X86 Assembly, Verilog, MIPS, VHDL, Swift, JCL, UNIX, bash, REST APIs, CSS/SCSS, MATLAB, PSPICE, OrCAD, Altium, Virtual Machines, AWS, IBM Mainframes and z/OS, Spring, Agile, Angular, React, Selenium, Docker, Jira, Jenkins, CI/CD
Circuit Analysis: Powered breadboard, multimember, oscilloscope, function generator, soldering

Education

University of Massachusetts Amherst May 2019
B.S. Computer Systems Engineering

Projects

MIDI Controller Spring 2017

- Built a breadboard MIDI Controller interface and programmed through an ATMEL atmega32. The synthesizer was simulated using MIDI-OX. The project began by designing an efficient breadboard layout based on the schematics of the controller.
- Software for the controller was written in C using AVR Studio and Sublime. The program controlled 3 analog switches which supported three functions: record, playback, and (speed) modify. Notes are stored into the AVR's EEPROM with proper delays by using timer interrupts and can be replayed back to the synthesizer. Speed modification is controlled by a photocell.

Pipelined MIPS Simulator Spring 2017

- Simulator for a pipelined machine running the MIPS instruction set cycle by cycle, written in C. The program has 6 parameters: the number of cycles for memory access, multiply operations (specifically), and all other execute operations, the run mode, the program location, and the output location.
- The program accurately reports the contents of each of the 32 registers cycle to cycle and can be accessed in either numeric or alphabetic format. After a simulation halts the contents of the registers, fraction of cycles each stage consumed, and total run time are output.