

Nick Shields

COMPUTER ENGINEERING · 3B

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Summary

- Effectively able to work with various programming languages such as Python, Ruby and C.
- Strong technical ability in test automation, CI/CD systems and DevOps using industry leading tools such as Jenkins, Docker and Ansible.
- Working knowledge of the TCP/IP stack and packet sniffing/inspection through past personal projects and internships.
- Experience carrying out various engineering program management tasks such as leading weekly Jira bug scrubs and team syncs.
- Proven communication skills enhanced through working alongside various engineering teams in a large corporate environment.

Work Experience

Apple

Sunnyvale, CA

SOFTWARE ENGINEERING INTERN - SPECIAL PROJECTS

Sept. 2018 - Aug. 2019

- Contributed to Python test automation frameworks that automated TCP/IP stack testing on various Apple proprietary hardware targets.
- Defined and implemented Jenkins jobs using declarative pipelines to aid in Continuous Integration efforts.
- Built a hardware test lab relied on by various teams and automated MacOS/Linux host provisioning using ansible and bash scripting.
- Improved upon existing network test coverage through contributing well defined and thought out test cases.
- Conducted weekly Jira bug scrubs that improved overall team organization and focus.

Ford Motor Company

Ottawa, ON

SOFTWARE DEVELOPER

Jan. 2018 - Apr. 2018

- Constructed an automation platform in Python that automated LTE/WCDMA cellular throughput testing on Ford's Telematic Control Unit.
- Updated internal Python device drivers and automation frameworks to provide compatibility with Ford's latest hardware.
- Debugged hardware failures, worked closely with various Software Development Teams and developed software patches.

Oracle

Toronto, ON

DEVOPS INTERN

May. 2017 - Aug. 2017

- Worked on several infrastructure balancing projects that improved fault tolerance in the cloud.
- Assisted in the development of a Slackbot written in Node.js that answered developer questions and gave metrics on cloud infrastructure.
- Created and maintained Teamcity projects which automated various tasks, helping to improve overall development efficiency.
- Developed and improved upon existing monitoring infrastructure by leveraging Ruby, Chef and Sensu.

Evertz Microsystems

Burlington, ON

STUDENT PROJECT ENGINEER

Sept. 2016 - Dec. 2016

- Configured and maintained Media Asset Management and automation systems for broadcasting companies such as NBC and Globecast.
- Corrected database discrepancies by implementing JavaScript and Python scripts, utilizing in-house software APIs.

STUDENT DESIGN ENGINEER

Jan. 2016 - Apr. 2016

- Developed device drivers used to interface between Evertz software and physical devices for AV applications using Python and Twisted.
- Practiced proper testing procedures and became familiar with development and team tracking software (Jira, Stash, Confluence, Git, Jenkins).

Projects

HomeDash.info

PERSONAL WEB-APPLICATION

- Developed a Dockerized Ruby On Rails application that provides metrics and the status of various devices found in my apartment.
- Designed scripts that provide remote interaction with devices including a wireless router, philips-hue, Arduino, Smart TV and Xbox One.
- Leveraged Python with Cron to periodically dump device information and internet connection metrics into a locally managed MySQL Database.

NodeRemote.me

PERSONAL WEB-APPLICATION

- Utilized an Arduino configured with an IR LED and receiver to send and capture IR commands to and from IR compatible devices.
- Deployed a Node.js application onto a Raspberry Pi and developed a simple web remote design using HTML, CSS, Bootstrap and jQuery.
- Interfaced the Pi with the Arduino via Serial to effectively use the node application to send IR commands to the configured devices.

Automated Gardener

PERSONAL PROJECT

- Interfaced an ESP8266 Wifi module with several moisture sensors and relays to create an automated irrigation solution.
- Built a REST API to provide remote functionality and leveraged the Dark Sky API to make informed decisions on when to irrigate.

Education

University of Waterloo

Waterloo, ON

CANDIDATE FOR BACHELOR OF APPLIED SCIENCE, COMPUTER ENGINEERING

Sept. 2015 - Present