Nathan Whitcome

Software Engineer, Motorola Solutions

Contact

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Chicago, IL

Technical Skills

Languages

C, Java, Python, SQL, JavaScript, HTML, CSS, Assembly

Others

Spring, Kubernetes, Docker, Gradle, Microsoft Azure, Git, Junit, Mockito, Agile, Embedded Systems, Wireless Networking Protocols, Vue.js, Node.js, Angular

Education

Iowa State University, Ames IA

Master of Engineering
Computer Engineering
(Fall 2020 – Fall 2021)
Advanced Wireless Focus Area
GPA: 3.84

Bachelor of Science
Computer Engineering
(Fall 2016 – Spring 2020)

Professional Experience

Motorola Solutions (January 2022 - Present)

Software Engineer

- Developed and tested backend communication systems for radio networks using Java, Elixir, and Python
- Worked in small teams following Agile principles with two-week sprints
- Built services for communicating with environmental sensors and displaying that information to customers
- Worked in the Spring framework, testing and deploying code using GitHub pipelines

Iowa State University (2020 – 2021)

Teaching Assistant (Spring 2021 – Fall 2021)

- Ran labs and hosted office hours for Computer Networking and Embedded Systems Programming classes

Graduate Research Assistant (Fall 2020 – Spring 2021)

- Collaborated with a team on the ARA project, focusing on developing an advanced wireless testbed for agricultural purposes
- Studied Software Defined Networking Controllers in depth
- Attended weekly research meetings and gave presentations on relevant academic papers

Power Electronics International (Summer 2018 – 2020)

Software Engineer Intern

- Coordinated with a team to develop a data collection and analysis system using Vue.js, Node.js, and PostgreSQL
- Designed and developed internal data management tools using Python and SQL

Personal Projects

Simulation of a Wireless Network Attack Using a Sink Node in Contiki Cooja

- Coordinated with a team to design and execute a simulation of an attack involving a sink node listening to unencrypted data
- Proposed and tested a solution involving asymmetric and symmetric encryption

Spotify-Lifx

- Designed a webapp that changes the color of Lifx smart bulbs to match colors of the album art of what the user is currently listening to on Spotify
- Developed using JavaScript, HTML, CSS, Vue.js, the Spotify API, and the Lifx API