Neil Wilcoxson

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Education

Bachelor of Science in Computer Science | Baylor University | Waco, TX
- **Relevant Coursework**
  Data Structures, Algorithms, Operating Systems, Networking, Computer Architecture, Database Design, Software Engineering, Competitive Cybersecurity, Numerical Methods, Data Mining
- **Capstone Project**
  A modern web based news aggregation application with personalized recommendation engine, intelligent category filtering, and bias detection
  - Technologies Used: Python, Flask, MongoDB, Vue.js, Bootstrap, OAuth, Docker
- **GPA** 3.64 (Major), 3.54 (Overall)

Experience

Software Engineer | Qualcomm Technologies | Boulder, CO | January 2020 – Present
Rearchitected and maintained data plane components for 5G TBS (Test Base Station)
- Enabled high throughput testing by leveraging Data Plane Development Kit (DPDK)
- Prototyped and thoroughly evaluated various metrics of new features and performance enhancements
- Implemented new cache friendly data structures for performance optimization
- Migrated data plane components from a pipeline model to a run to completion model
- Provided support for customers by reviewing logs, debugging error conditions, and implementing fixes

Software Engineer Intern | Viasat | Germantown, MD | May 2019 – August 2019
Implemented centralized authentication and authorization solution for network management components
- Evaluated several possible solutions and reported feasibility details for each approach in a trade study
- Authored system and component level requirements along with supporting software design documentation
- Integrated legacy Java web applications (GWT, Tomcat) into authentication system to improve security
- Created a strategy for automated testing (Selenium) and manual testing to ensure reliability and compliance

Software Engineer Intern | Viasat | Carlsbad, CA | May 2018 – August 2018
Developed a testing and demonstration framework for Raspberry Pi based network acceleration prototypes
- Employed an Agile development method to efficiently implement and test new functionality
- Configured hardware to construct emulation environments for prototype demos (modems, routers, VPN, etc.)
- Strategically tested multiple software configurations to determine optimal defaults for release product
- Developed JavaFX (interface and logic) application to facilitate easy demonstration, test, and results analysis

Skills

- C, C++ (STL, Multi-threading, CMake, Networking)
- Linux (Bash, CentOS, Red Hat, Zsh)
- Java (JavaFX, JUnit, Maven, Gradle)
- Version Control and Code Review (Git, Perforce, Gerrit)
- Documentation and Requirements Management (Confluence, Jira, Jama)

Additional Accomplishments

- Professional Development Courses
  - Moving to Modern C++
  - Introduction to DPDK (Data Plane Development Kit)
  - Introduction to 5G
  - Agile Development Practices