

Nicholas Foss

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LinkedIn | GitHub

Experienced professional interested in designing and developing applications within the defense industry. Looking to further career in modern C++ and full stack development. Productive team player and leader.

Education

University of Illinois at Urbana-Champaign

BS in Computer Engineering Dec 2015

3.32

McHenry County College

Associates in Science with High Honors May 2013

3.77

Proficient Skills

C/C++20 | CMake | Bash | UML | Git | GitHub/GitLab | Jira/Confluence | DevSecOps via Jenkins/GitLab CI | Docker | Artifactory/Conan | GTest/GMock | Google Benchmark | Catch2 | Boost | ZMQ | C++ Sanitizers ASAN/TSAN/UBSAN | Yocto Project | DOORS | IBM Rhapsody | VSCode | SonarQube | Test Driven Development | Linux Kernel Tuning | Redhat Linux

Familiar Skills

Java | Python | HTML/CSS | JavaScript | Jekyll | Verilog | MatLab | Xilinx Vivado Design Suite

Experience

Sr. Specialist Software Engineer, L3Harris Technologies (Melbourne, FL) Jul 2022 - Present

- Worked remotely as sub to folks in CO and NJ for DoD space program
- Developed real-time, containerized C++ applications using modern C++20
- Utilized data streaming technologies like ZMQ to allow fast communication between apps

Senior Software Engineer, Raytheon Technologies (St. Petersburg, FL) Mar 2016 - Jul 2022

- Coordinated with hardware and systems engineers to develop working software products through requirements, modeling, design, implementation, and test for DoD programs
- Integrated FOSS and COTS products into DoD applications
- Led innovation efforts by evaluating and incorporating FOSS and COTS products into Continuous Integration/Continuous Delivery (CI/CD) infrastructure and software development workflows
- Supported customer integration events both in-person at test sites and remotely from the office
- Incorporated open and modular software architecture using C++ design idioms such as Non-Virtual Interfaces (NVI), Strategy patterns, & more to promote code reusability & testability
- Led several cross-functional teams in program's SAFe organization by serving as Scrum Master, Product Owner, and Software Architect
- Presented to customer at software board reviews to articulate progress of capability development across program(s)
- Analyzed system performance of applications running on embedded target(s) using Linux tools like htop, iperf, & tcpdump
- Led customer-funded research & development effort to prototype legacy product on a new hardware platform with modern processor architecture
- Attended Raytheon training for Anti-Tamper concepts and techniques
- Attended Raytheon Anti-Tamper Technical Exchange

Student, University of Illinois (Champaign, IL) Aug 2013 - Dec 2015

- Communication Networks (TCP/IP)
- Distributed Systems
- Embedded Systems (programming on RTOS)
- Computer Security
- Computer Systems Engineering (Operating Systems)
- Digital Signal Processing (programming on FPGA using SystemVerilog)

Accounts Receivable Intern, Primesource Healthcare (Buffalo Grove, IL) Sep 2012 - Aug 2013

- Identified and corrected errors in denied insurance claims in order to collect payment for medical services provided by PrimeSource
- Worked with supervisors to restructure billing protocols to stop errors from occurring
- Updated patient information and financial transactions in Intelligent Medical Software (IMS) database

Youth Football Coach, Cary Junior Trojans (Cary, IL) Jun 2011 - Nov 2012

- Taught football fundamentals, discipline, responsibility, leadership, & teamwork to adolescents ages 12-14
- Coordinated with other coaches to come up with our 20-22 man roster each season, schedule meetings/practices, & scouting