

Steven Festenstein - Software Engineer

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Overview

Results-driven Software Engineer with over 25 years of experience designing high-performance applications using C++, Java, and Python. Specializes in object-oriented programming, GUI development, and distributed systems, with a proven track record of delivering real-time software solutions and leading technical training for engineering teams.

Critical Skills

- Expert in object-oriented programming with C++.
- Skilled in GUI development using C++ and QML with the Qt Framework.
- Proficient in designing distributed applications using ZeroMQ and Google Protocol Buffers.
- GCC, G++, Clang, CMake QMake and GNU Make for cross-platform development.
- Long history of working on RF systems.
- DDS, CORBA, and real-time software development for Linux and Windows.
- Java development with expertise in JavaFX and Swing for GUI applications.
- Java, Python, .NET, C# for diverse software solutions.
- Git, Subversion, Gitlab, Atlassian toolsuite.
- Scrum-based Agile development methodologies.
- Technical Trainer: developed and presented training modules to large audiences.

Staff Software Engineer, Lockheed Martin, October 1996 to Present

SEWIP Block 2

Participated in HMI development by porting legacy Java code to C++/Qt. Modernized the build process using CMake and updated developer tools to industry standards

Terrestrial Layer System (TLS) Development

Consulted and later developer with the UI Team. Implemented a geographic map application to paint tracks on top of a map that can be panned and zoomed, much like Google Maps. Updated build process to use CMake. Updated internal data models to use SQLite databases. Addressed software defects, stability, and performance.

Shipboard Panoramic Electro-Optical Infra-Red (SPEIR) - HMI Lead

Led a team of 4 engineers to develop front-end software for the SPEIR program, using Qt framework and C++ on RHEL 8 to develop and deploy. Employed video streaming technology to display multiple videos from various imaging sensors on Naval Surface Vessels. Developed an OpenGL Video Player to render streaming videos in H264 and H265 format. Developed middleware using ZeroMQ and Google Protocol Buffers to interact with backend.

BLQ-10 OMI Working Group Software Lead

Participated in an Operator Machine Interface (OMI) Working group to develop next-generation user interfaces from scratch. Took responsibility of all aspects of SW Development. Led a team to implement SW features and updates under demanding timelines. Employed OpenGL and the Qt framework with C++ to create an attractive and responsive user interface. Prepared SW for customer demonstration and feedback every 6-8 weeks.

BLQ-10 Electronic Warfare System

Developed front-end software in Java Swing and later in C++ with the Qt Framework. Employed OpenGL to render large data sets quickly. Used DDS for inter process communication. Interfaced with multiple SQL databases. Engaged in many aspects of Electronic Warfare.

Further Project Experience on Request

Other Experience

Technical Interviewer, Lockheed Martin

- Conducted hundreds of interviews for software roles, including interns, experienced professionals, and contractors.
- Designed coding exercises and technical questions to streamline the interview process.
- Significantly reduced employee turnover.

Technical Trainer

- Developed and delivered a nine-part C++ curriculum for new software engineers. Conducted the curriculum in front of hundreds of participants.
- Created a two-part course on OpenGL and Qt Framework, enhancing team capabilities in GUI development.
- Presented four advanced C++ lectures, including "CMake Project Management" and "Distributed Computing with ZeroMQ," to audiences of hundreds of engineers.

Clearance - Top Secret (Interim) Clearance, Secret held since 1996 (last renewed 2023).

Education

- Bachelor of Science in Electrical Engineering (Signal Processing)
State University of New York at Buffalo
[1991-1994]
- Bachelor of Science in Physics (Mathematical Physics and Astrophysics)
State University of New York at Fredonia
[1994-1996]