**Steven Festenstein – Software Engineer**

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**Overview**

Staff Software Engineer at Lockheed Martin with 28 years of experience. Interested in finding new career opportunities in the fields of Software Engineering, Computer System Architecture, Integration Engineering, Training, and Software Project Consultation.

**Critical Skills**

* Extensive experience in Object Oriented Programming in C++.
* Expertise in C++ project design using CMake.
* Well versed in GUI development in C++ and QML using the QT Framework.
* Further experience with .net13, C#, Java, and Python.
* Expertise in configuring development tools to maximize their usefulness.
* Expertise in integrating AI Coding assistants with development tools.
* Expertise in using and configuring VSCode.
* Expertise in developing training materials and presenting them to large audiences.
* Conducted over 200 Software Interviews.
* Designing distributed applications with Zero MQ and Google Protocol Buffers.
* Further experience with DDS and CORBA.
* Well versed in developing for Linux and Windows platforms.
* Well versed in GCC, G++, Clang, and GNU Makefiles.
* Real Time Software development with demanding timelines.
* Experienced with Java development using the Eclipse IDE.
* Experienced with Java GUI development using JavaFX and Swing.
* Experienced with Configuration Management solutions, including Git, and Subversions.
* Experienced with Scrum style Agile Development.

**Experience**

**Staff Software Engineer, Lockheed Martin October 1996 to Present**

Engaged in all aspects of software development, including requirements analysis, test plan construction, high-level object-oriented design, detailed design, code and unit test, class integration testing, system level integration, maintenance, and customer delivery. Specific projects are as follows in reverse time order:

* **Terrestrial Layer System (TLS) HMI Development:** Participated and consulted in HMI development for TLS. 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.
* **SPEIR – HMI Lead:** lead a team 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.
* **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. Lead a team to implement SW features and updates under demanding timelines. 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.
* **Autonomic Logistics Integration System (ALIS) for the F-35:** Developed front-end software in Java using JavaFX. Operated under a Scrum style Agile development model.
* **MEADS Radar Defense System**: Developed and maintained real time, distributed, embedded software involved with target detection, target tracking, signal processing, environmental adaptation, electronic warfare, and Radar Environment Stimulation (RES). Software was written in C++ for LynxOS operating system. Offline tools were written in C#. HMI interfaces were written in Visual C++.
* **VH-71 Presidential Helicopter**: Designed and implemented software written in C for the VxWorks operating system. Software allowed for higher level packages to easily access various Mil-spec interfaces.
* **AN/TPS-77 Radar**: Lead a team of software engineers to develop new tracking software written in C++ for the Solaris operating system. Coordinated the efforts of the team to maintain a schedule and budget. Successfully integrated software into the system and participated in full system integration prior to customer delivery.
* **AN/FPS 117 Radar**: Ported Software from VMS operating system to Solaris. This included porting thousands of lines of code written in Ada 83 to Ada 95. Participated in redesigning components written in Fortran 77 to C++. Participated in software integration and ultimately systems integration. Participated in customer installation and delivery.
* **AN/BSY-2 command and control system for the Seawolf class submarine**: Maintained and Developed Ada 83 software. Fixed software bugs and developed new functionality for Target Motion Analysis and Contact Management software.

**Other Experience**

**Interviewer for New Software Team Members:** Conducted hundreds of interviews for new software team members. Candidates included summer interns, experience professionals, and contractors. Participated in developing the interview process, such as devising code exercises and technical questions.

**Team Training:**

* Developed a nine-part curriculum for SW engineers to understand the important parts of C++. Presented this curriculum several times for new employees.
* Developed a 2-part curriculum for engineers interested in OpenGL and the QT framework.
* Presented 4 advanced lectures on C++: “Simplifying the Scarier Parts of C++,” “C++ As a Compiled Language,” “Modern and Practical Concurrency in C++,” and “Simplified Distributed Computing with ZMQ and Google Protocol Buffers.”

**Clearance**

Currently hold a Top Secret (Interim) Clearance with the US government. Clearance level has been held since 1996. Last renewal was in 2023.

**Education**

**State University of New York at Buffalo** – Bachelor’s Degree in Electrical Engineering, specializing in Signal Processing.

**State University of New York at Fredonia** – Bachelor’s Degree in Physics, specializing in Mathematical Physics and Astrophysics.

**Udacity** – ‘Nanodegree’ Intro to Machine Learning with Python, PyTorch, Matplot, numpy, and Jupyter Notebooks