Nick Sutera

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SUMMARY

Versatile principal software and systems engineer with over 17 years of experience in flight, ground, and test systems for space and airborne sensor programs. Recognized as a utility player adept at taking on diverse roles across the full program lifecycle, from requirements and architecture definition through design, implementation, integration, test, and operations. Experienced in analysis, modeling and simulation, and field testing, with a strong foundation in RF, embedded software and applications development, and multidisciplinary troubleshooting across software, hardware, and algorithm domains. Active TS/SCI clearance.

SKILLS

- Full engineering lifecycle experience including requirements development and management, interface definition, design, integration, verification and validation, and test execution.
- Strong background in system-level analysis, modeling and simulation, and CONOPS development.
- Comfortable interfacing with customers via presentations, technical writing, and in-person collaboration.
- Proficient with RF systems and hands-on test equipment including signal generators, spectrum analyzers, network analyzers, and oscilloscopes.
- Skilled in configuration management and version control systems including Git with prior experience using Subversion and CVS.
- Primary Languages, Environments, and Tools: Java, C/C++, Bash, MATLAB, Linux, Windows, NetBeans, VisualStudio/VS Code, Docker, WSL, VirtualBox, VMWare

EXPERIENCE

Assurance Technology Corporation, Carlisle, MA

Principal Software & Systems Engineer, 2017 - Present
Senior Software Engineer, 2014 - 2017
Software Engineer, Oct 2011 - 2014

Progressed from software engineering contributor to Ground Software Lead, ultimately driving requirements, architecture definition, design, development, integration/test, and sustainment for multiple mission-critical embedded space and airborne sensor programs.

- Contributed and later lead as part of a small, cross-functional team, collaborating closely with hardware, algorithm, and systems engineers.
- Developed and supported flight, ground, and test software suites for radar warning receiver (RWR) systems as well as various other embedded systems.
- Developed and supported tools for the analysis and visualization of flight and test data including radar and other mission data, system logs & status, and telemetry.
- Frequently engaged with management and customers via oral presentations and working groups during the entire program lifecycle.
- Routinely wrote, contributed to, and reviewed technical documents both for internal and customer use.
- Utilized DOORS for collaborative requirements management amongst the systems engineering team.
- Took the lead designing and maintaining command and telemetry data models and application-layer communication protocols.
- Performed system-level troubleshooting and analysis, diagnosing issues affecting RF, embedded software, algorithms, and digital/analog electronics.
- Utilized RF test equipment extensively for integration, validation, and performance characterization.

PAST EXPERIENCE

Textron Defense Systems, Wilmington, MA

Associate Systems Analyst, Jan 2009 - Oct 2011
Co-Op Engineer, Jan 2007 - Dec 2008
Co-Op Engineer, Jan - Aug 2005

- Assisted in the testing and operation of an advanced computer simulation, modeling physical dynamics and electrical systems of an anti-vehicle sublet.
- Assisted with the performance analysis of an embedded target detection algorithm.
- Worked to port embedded C code for an anti-vehicle sublet to a new compiler system for better speed and memory optimization.
- Worked to test several types of deployable systems both in the laboratory and in the field.

American Power Conversion, North Billerica, MA

Co-Op Engineer, Jan - Jun 2006

- Assisted in the initial feasibility and design of a high frequency, DSP controlled, uninterruptible power supply.
- Analyzed system costs based on topology, power output, and other factors.

Avidyne Corporation, Lincoln, MA

Co-Op Engineer, Nov 2002 - Jun 2003

- Assisted in the final testing of a computer-based aircraft navigation system certified by the FAA.
- Fabricated test and production cables, tested and certified newly assembled products, and triaged returned products from customers.

EDUCATION

Northeastern University, Boston, MA

Post-Graduate Work, Computer Engineering, Sep 2008 - May 2012
Bachelor of Science, Electrical Engineering, Computer Engineering Minor, Sep 2003 - May 2008

- Graduated Magna Cum Laude, Dean's List, Excellence Scholarship
- Optimization Methods (C++), Computer Architecture, Communications Systems, Computer Vision (MATLAB), Algorithms and Data Structures (C++), VLSI Design (Verilog), Linear Circuits, Electronics, Digital Logic Design, Engineering Design (AutoCAD), Engineering Problem Solving and Computation (C++ and MATLAB), High Level Design of Hardware/Software Systems (SpecC), Computer Architecture, Combinatorial Optimization, Introduction to Computer Engineering (Algorithm Design and Analysis using C++), Digital Communications, Applied Probability and Stochastic Processes
- IEEE, Wireless Club