Mark V Senofsky
Software Engineer

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Clearance
TS

Languages
Strong: C, Python, Rust, Haskell

Experience: C++, Java, Javascript, x86, ARM, VHDL, Verilog

Tools and Skills

- Django, Hakyll, Flask
- TensorFlow, Pandas, SciKit-Learn
- Docker, Vagrant, libvirt
- Linux systems programming, kernel development
- GitLab, BitBucket, GitHub
- Continuous Integration and Deployment with Agile
- HTML, CSS, Sass, BEM, JS
- GNU Radio, Ettus USRP
- Xilinx Zedboard, Ultrascale, Vivado

Experience

Star Lab, San Antonio, TX 2018 - Present
Software Engineer
- Developed data mining tools and implemented processing techniques to support data scientists
- Developed a command line utility tool for that cleanly generates Intel QPI traffic
- Worked with a team on securing VDI infrastructure utilizing AWS, XenBlanket, and Docker

Raytheon Centers of Innovation, San Antonio, TX, 2015 - 2018
Software Engineer
- Developed a Linux driver for a Virtex UltraScale FPGA that implemented anti-tamper features
- Developed software on a large-scale project using Agile techniques with a geographically separated team
- Implemented code coverage techniques to ensure 100% of critical software was thoroughly tested
- Implemented high quality testing techniques such as Orthogonal Array Testing

Vulnerability Researcher
- Researched vulnerabilities on embedded Linux devices
- Researched vulnerabilities on devices utilizing 802.11 and GSM with Ettus USRP N210s + GNU Radio
- Utilized reverse engineering and penetration testing tools including IDA Pro, binwalk, and Burp Suite
- Scripted custom tooling for reverse engineering and penetration testing efforts

Southwest Research Institute, San Antonio, TX, 2013 - 2014
Student Engineer in Division 9: Aerospace and Systems Engineering Group
- Developed prototype software for the Xilinx ZedBoard in conjunction with the Ettus USRP N210
- Performed QA for avionics equipment on the A-10 Thunderbolt II jet aircraft
- Developed systems engineering documentation to be delivered to customers

Personal
Speaking Engagements
- Hardware Reverse Engineering for Digital Forensic Analysis II over multiple semesters
- Various security topics at the Computer Security Association related to OpenSSH, securing Linux systems, Pentration Testing, Reverse Engineering, and Capture-the-Flag (CTF) competitions

Education

University of Texas at San Antonio (UTSA) - 2015
- B.S. Electrical Engineering with an emphasis on Computer Engineering. GPA: 3.5
- Competed at the National Collegiate Cyber Defense Competition and won first place in Southwest Regionals
- Systems Administrator for various machines (Debian based, Red Hat based, BSD based, Arch)
- IEEE Robotics Team Captain - Competed in Southwest Regionals
- IEEE Circuit Design Team Captain - Competd in Southwest Regionals

Stanford - Coursera
- Machine Learning
- Cryptography

MIT - OpenCourseWare
- Signals and Systems
- Circuits and Electronics
- Linear Algebra
- Multivariable Calculus
- Single Variable Calculus

University of Washington - Coursera
- Dynamic Public Speaking track