Romuald Serge Valme

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U.S. Citizen

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EDUCATION:

Worcester Polytechnic Institute (WPI), Worcester, MA
Masters of Science, **Computer Science (CS),** May, 2019
Bachelors of Science, **Electrical and Computer Engineering (ECE),** Feb, 2017

Foxborough Regional Charter School, Foxborough, MA,
High School Diploma**,** June, 2013

Related Courses: Machine Learning, Cryptography, Algorithms, Network Security, Mobile and Ubiquitous Computing in Java, Discrete Time Signal & System Analysis, Embedded Computing, Real-Time Embedded Systems in C, Object Oriented Design Concepts in Java, Advanced Digital Systems with FPGAs, Embedded Computing, Systems Programming in C, Object Oriented Design Concepts in Java, Advanced Digital Systems with FPGAs.

SKILLS:

Programming/Tools: C and C++, Python, Verilog, Java, Matlab, Git, Wireshark, HTML, CSS

Projects:

PNTHub Code Development and Testing, The MITRE Corporation, May 2015 – August 2015
Worked in a team of several professional engineers to ensure vehicle integration of a fabricated embedded device. Developed code and test infrastructure in C and C++ to evaluate message compliance and accuracy. Used Cmake and RPM to improve the build structure of the project.

Major Qualifying Project: August 2016 – October 2016
Worked with a MITRE Corporation side-channel framework, in creating a Test Vector Leakage Assessment (TVLA) tool in Python, which allows an individual to see if their device is leaking critical information, and as a result subject to side-channel attacks.

Embedded Security Capture the Flag (eCTF), The MITRE Corp, June 2016 – Aug. 2016
Worked in a team of 4 in developing a secure bootloader in C and C++. Developed a secure protocol utilizing various cryptographic techniques. Analyzed vulnerabilities in opposing team's implementations.

Interdisciplinary Qualifying Project: August 2015 – May 2016
Worked in a team of 4, developing a user study on perceptions of multifactor authentication systems. Obtained over 60 participants in study who were surveyed for 10 weeks, on their usage of a two factor authentication system known as Authy.

Canary System Development: March 2017 – August 2017
Worked in various teams, on developing a platform to analyze and detect anomalous GPS activity. Created a web app to present said information clearly for a user using Python, HTML, CSS and Javascript. Crafted several automation scripts in Python to control numerous devices for system operation.

Job Experience:

R&D S&E, Cybersecurity at Sandia National Labs, August 2019 – Present

Aided in securing energy infrastructure through emulation and analytics. Developed embedded system capabilities allowing devices to communicate through standard communication protocols.

Lead Instructor at the Beaver Works Summer Institute (BWSI), June 2018 – August 2018
Taught embedded security concepts, as well as developed and facilitated numerous labs for students at a STEM-based summer program ran by Massachusetts Institute of Technology (MIT) Lincoln Labs.

Electronic Systems Development Intern, The MITRE Corporation, May 2015 – Aug. 2016
Worked on two projects, developing software, protocols, and tests to ensure the optimum success of my team's objectives.

Research Assistant, ECE Cryptography Lab, WPI, October 2015- December 2016
Developed Simon Cipher implementation in C. Worked on a Fault Injection Setup in Python.

Resident Advisor, WPI, August 2014 – December 2016
Worked in various teams to create and run programs for students. Fostered a community where individuals felt welcome, and were able to achieve academic success.

Photographer, WPI, August 2013 – May 2014
Attended several WPI events in order to photograph them. Helped manage the WPI Residential Services social media pages.

Central Transport Worker, Brigham and Women's Hospital, July 2011 – August 2013
Transported materials and people from location to location within the Brigham and Women's Hospital.

Karate Instructor, Brockton Uechi-Ryu Karate Academy, July 2011 – August 2013
Taught students karate forms and movements. Instilled several virtues such as self-discipline, honesty, and patience in lessons.

Multi-Instrumentalist, United Evangelical Christian Church, July 2009 – Present
Play instruments such as guitar and drums during events and service.

Honors:

Academic Dean's List at WPI 2013-2016
Member of Eta Kappa Nu Electrical and Computer Honor Society
Spot Award at the MITRE Corporation Summer 2018
Scholarship for Service (SFS) Recipient August 2017 – May 2019