

Gabriel E. Marcano

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Education

B.S. in Software Engineering, Rochester Institute of Technology, May 2015
Minors in Computer Engineering and Music Performance
Cumulative GPA: 3.90

Experience and Projects

The MITRE Corporation, Computer Science Engineer, Sr. (2017-2019)

Volatile organic compound detector using Quantum Dots-Polymer Nanocomposite (QDPN) deposits, Lead control software developer

- Developed primary collection control algorithm in Python for photodiode based collector.
- Helped design ultra-violet LED driver for light source.

Autonomous UAS platform, Camera and control systems developer and integrator

- Ported Linux kernel drivers for Sony 4K camera sensor from one Nvidia TX2 carrier to another.
- Developed control framework in C++ to manage UAS higher-level decision making.
- Developed Android Java application to interface with remote platform telemetry.

Sensor fusion on vehicle platform, Camera integration developer

- Developed software in C++ to pipe HD-SDI camera data to ROS through V4L2.

Neuromorphic camera research, Assistant investigator

- Helped characterize neuromorphic camera performance.
- Developed software in C++ to capture data, and experimented with noise suppression filtering.

Low-power computing performance field study, Lead SoC platforms investigator

- Benchmarked system performance of Nvidia Tegra platforms for deep learning applications.
- Profiled power consumption of Nvidia Tegra platforms under different levels of load.

Cloud-based scalable image analysis framework, Core framework co-developer

- Developed framework in Python with plugin mechanism for analysis algorithms.
- Leveraged Mesos and Docker to support scalability across cloud nodes.

The MITRE Corporation, Computer Science Engineer (2015-2017)

Prototype array camera research, Lead software developer

- Designed control and real-time acquisition software in C++.
- Helped design remote API control for a custom high-speed FPGA-enabled array camera.

Stand-off portable CBRNE detector prototype, Lead software developer

- Integrated and tested system, composed of COTS components.
- Designed software controlling synchronization between camera, light source, and filter in C++.
- Developed low-level microcontroller software in C controlling high-power flash.

Rochester Institute of Technology (2009-2010, 2012-2015)

Ouroboros, open-source customization web-server generator, Lead embedded systems developer

- Developed C++ code template used by custom Ruby code generator to generate web server.
- Implemented custom C++ plugin support for extending web server behavior.

Skills

Programming languages:

Modern C++, C, Python, and Java. Experience with ARM, AVR, and HCS12 assembly.

Languages:

Fluent in Spanish and English.

Honors

Two MITRE Trailblazer awards for contributions to important projects.
RIT GCCIS undergraduate delegate for commencement ceremonies.
Dean's List of Distinguished Students.
Eagle Scout, Mohegan Council, Boy Scouts of America.

2019
May 2015
All semesters and quarters
January 2009