

Darren Mascioli

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Experience

Siemens Mobility, Inc.

Engineering Development Program

Onboard Software Rotation

- Created database of train system communication messages along with web interface to allow for synchronized development process. (Python, SQLite)
- Developed key features for custom automatic test generation program. (C#, WPF)
- Wrote automated scripts to find errors in logs to track down software issue. (Python)
- Assembled and coded simulator for crash-hardened device to test functionality of new software features and RS485 communication on train system. (Arduino, C++, Soldering)
- Wrote unit tests to generate code coverage for embedded train firmware. (C)

Pittsburgh, PA

Jan 2021 – June 2020

Bridge Fusion Systems

Embedded Software Engineering Co-Op

- Added ethernet connectivity to track switch platform. (C, ARM – STM32)
- Introduced and developed new data storage platform with SQL Server for manufacturing production database. (SQL, Python)
- Added new firmware to power dissipation devices to automatically prevent diesel generator wet stacking. (C, ARM – NXP)
- Implemented firmware features for streetcar track switch equipment including adding support for new SPI flash memory component. (C, ARM – STM32)
- Created additional software feature to update firmware version of multiple IoT devices at one. (C#)
- Expanded functionality of and created multiple WPF GUI applications. (C#)
- Performed multiple product demonstrations to clients to ensure correct implementation of requirements.

Plum, PA

May 2018 – July 2020

3-rotation co-op,
Internship

Education

University of Pittsburgh – B.S. in Computer Engineering

Minor in Political Science

GPA: 3.822

Relevant Coursework:

Computer Networks, Practical AI, Software Engineering, Embedded Processors and Interfacing, Databases, Data Science, Algorithms, Operating Systems, Software Quality Assurance, Digital Design, Computer Architecture, Data Structures, Web Applications, Digital Logic, Computer Organization, Electronic Circuits, Digital Systems Lab, Written Professional Communications

Pittsburgh, PA

Dec 2020

Skills

Languages:

C, C++, Python, Java,
C#, HTML/CSS,
JavaScript, SQL

Tools:

Visual Studio, Eclipse, Git, SVN,
Jira, JUnit, Selenium, SQL Server,
MySQL, Flask, WPF

Operating Systems:

Windows (10, 7),
Linux (Ubuntu, Debian),
Embedded Round Robin, RTOS,
ThreadX, Docker, Raspberry Pi OS

Hardware:

Soldering, Oscilloscope, DMM,
UART, BLE, I2C, SPI,
1-Wire, Modbus, Ethernet,
Circuit Schematic Design

Projects

BikerBlinker

Senior Design Project

- Capstone project to develop voice-activated turn signals for bicycles
- Responsible for embedded firmware and wireless communication on ESP-32 (C++, BLE)
- Helped oversee schematic design, budget management, and integration testing

Aug 2020 – Dec 2020

2020 NAESC Engineering Leadership Summit

Conference Director

- Organized two-day national conference for almost 300 attendees
- Managed budget of approximately \$80,000 and communicated purpose of conference and national organization to secure ~\$10,000 worth of corporate sponsorship deals
- Facilitated virtual conference activities after cancellation of event due to COVID-19

Pittsburgh, PA

April 2019 - March 2020

Leadership

Engineering Student Council

Conference Director, Vice President, Board Member

- Worked with other officers to promote academic, professional, and social development within Pitt Swanson School of Engineering.
- Attended regional and national conferences to develop and expand leadership and communication skills.

Fall 2017 – Fall 2020

Achievements

Graduated Summa Cum Laude

University of Pittsburgh Dean's List

Tau Beta Pi Engineering Honor Society – Vice President, Inducted Member

Dec 2020

Multiple Semesters

April 2019 – May 2020