

Sam Alexander Celani

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PROFESSIONAL SUMMARY

Engineer with 5+ years of software development experience. Possess a bachelor's degree in Computer Engineering. Specializing in embedded programming in C/C++, networks programming in **Golang**.

WORK EXPERIENCE

Whirlpool Corporation – Benton Harbor, MI

April 2022 – May 2024

Embedded Software Test Engineer

- Conducted comprehensive testing of appliance connectivity across diverse product categories and software architectures
- Updated test suites when new projects increased scope of software capabilities
- Created software tools on Raspberry Pi for router control to aid in automating tests, saving 8 hours of manual testing per software drop
- Acquired proficiency with several in-house software tools for monitoring communications and flashing software

Pilot Systems International – Farmington Hills, MI

May 2021 – Feb 2022

Associate Systems Engineer

- Wrote system level and software level test scripts for Vector HIL system
- Performed manual System of System testing using CANalyzer
- Ensured proper linkage between requirements and test scripts in IBM DOORS

Advanced Power Systems Research Center – Calumet, MI

May 2018 – Aug 2019

APRA-E Project: NEXTCAR – Research Intern

- Developed software for wireless V2V, V2C, V2I, and C2V communications using AMQ Protocol
- Intelligently redesigned routing topology for efficient, cycle-free, robust communication
- Used Simulink, **Python** (pika module), RabbitMQ (message broker), Cohda DSRC (V2I transceiver)

Michigan Technological University – Houghton, MI

Jan 2020 – May 2021

Graduate Teaching Assistant

Awarded Outstanding Teaching Award

- Taught labs on a range of courses to junior- and senior-level EE/CpE students
- Focused on upper level courses on embedded systems, microcontrollers, and HW/SW integration
- Provided grades for around 100 assignments per week in a timely manner

Michigan Technological University – Houghton, MI

Jan 2018 – May 2021

ECE Learning Center Coach/Grader

- Helped EE/CpE students understand course material
- Graded weekly coursework for 60 students
- Tested updated lab manuals during course rewrite

EDUCATION

BSc – Michigan Technological University

August 2014 – May 2019

TECHNICAL SKILLS

- | | |
|--|---------------------------------------|
| • Microcontrollers (Arduino , ESP8266) | • Embedded Programming (MSP) |
| • IBM DNG and Confluence | • IAR Workbench |
| • Quartus, Qsys, and AMP | • Software Testing |
| • Algorithmic Design/Analysis | • CANalyzer |

PROJECT EXPERIENCE

Vice President, Wireless Communications Enterprise

Bird Sensor Team – Project Engineer

- Created a low-cost, low-maintenance sensor to aid in a time study of bird strikes on windows
- Primarily in charge of programming (**Arduino**)

Project: Sentinel, Personal Project

- Terminal-based Smart Home equivalent (**Golang**) and nodes (**ESP8266**) over TCP/IP

Project: Ekho, Personal Project

- Terminal-based fun with networked programs, to get “random” MOTD on login (**Golang**)