Sam Alexander Celani

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PROFESSIONAL SUMMARY

Charismatic software engineer with 10 years of programming experience specializing in embedded programming in **C/C++**. Proficient with writing scripts using **bash/sh/zsh** and **Python** in various professional and laboratory settings.

RELEVANT WORK EXPERIENCE

Mobis Technical Center of America – Plymouth, MI July 2024 – Present

Embedded Software Engineer

Develop in-house testing tools (**C++**). Test and release software to customers (**CANoe**). Develop terminal-based automations for several release processes (**bash/tmux/systemd**). Develop decision logic software, fix customer's change requests, and update tests accordingly (**MATLAB/Simulink**). Assist in bringing up and maintaining multiple CI/CD pipelines (**Jenkins**).

Whirlpool Corporation – Benton Harbor, MI April 2022 – May 2024

Embedded Software Test Engineer

Conducted comprehensive testing of connectivity features over diverse range of software architectures and 5 appliances platforms and 4 brands. Wrote new test scripts (**IBM DOORS**) to cover requirements of new features. Created software tools on **Raspberry Pi** for router control to aid in automating tests, saving on average 8 hours of manual testing per software drop.

Pilot Systems International – Farmington Hills, MI May 2021 – Feb 2022

Associate Systems Engineer

Wrote System-level, System-of-System Level, and Software-level test scripts for Vector HIL. Performed manual System-of-System testing using **CANalyzer**. Maintained traceability between requirements and test scripts using IBM DOORS Next Gen. Conducted assembly, verification, and validation of dSPACE HIL system.

Advanced Power Systems Research Center – Calumet, MI May 2018 – Aug 2019

APRA-E Project: NEXTCAR – **Research Intern**

Developed software for wireless V2V, V2C, C2V (**Python,** AMQ Protocol), and V2I (**Bash,** Cohda DSRC) communications. Quickly redesigned existing message routing topology into robust series of broadcasts and targeted messages, while avoiding cycles and channel congestion. Debugged **MATLAB** and **Simulink** files to enable capture of signals from vehicle instrumentation and sending to other vehicles.

EDUCATION

BSc, Computer Engineering — Michigan Technological University

TECHNICAL SKILLS

- MATLAB/Simulink Tools
- Atlassian Products
- CANalyzer/CANoe
- ARM/x86 µcontroller Programing
- git
- OpenGL/vulkan
- CAN/LIN
- I2C/SPI/UART
- Terminal Scripting
- Debian-, Ubuntu-, Arch-based OS's