

BRIGHAM CAMPBELL

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Embedded software engineer with experience upstreaming 11 patches to the Linux kernel. Seeking employment as a Linux kernel developer. Team player with proven track record of fixing problems before they become critical.

WORK HISTORY

Kernel Development Mentee (Part-Time)	May 2025 – November 2025
<i>Linux Foundation</i>	<i>Remote</i>
<ul style="list-style-type: none">Developed and upstreamed 11 patches during the mentorship, with a focus on display drivers in the drm subsystemInvited to return as a mentor for the Spring and Summer 2026 mentorship sessionsMet weekly via Zoom to learn from established Linux kernel experts and discuss challenges with fellow menteesAttended OSS Denver June 2025 to meet with mentors and attend presentations on maintainers' latest efforts	
Systems Software Engineer	June 2023 – Present
<i>Space Dynamics Laboratory</i>	<i>North Logan, UT</i>
<ul style="list-style-type: none">Retired an out-of-tree Linux kernel display driver in favor of an upstream driver to eliminate ongoing maintenanceFixed flawed assumptions about hardware enumeration by implementing deterministic udev rulesLed migration from in-house CMake tooling to vcpkg after critical upstream failure, mitigating supply-chain riskIdentified and fixed a security fault, replacing recoverable password storage with standards-compliant hashing	
Hardware Test Engineer	May 2020 – March 2021
<i>Campbell Scientific</i>	<i>Logan, UT</i>
<ul style="list-style-type: none">Collaborated with engineers and project managers to triage and resolve production hardware and software issuesIdentified a firmware flaw affecting date handling in pre-production embedded devices	
Software Engineer	January 2019 – December 2019
<i>NIATEC</i>	<i>Pocatello, ID</i>
<ul style="list-style-type: none">Identified and patched public-facing data spillage vector before users' personal data was compromisedMet with government customer and implemented requested features in bespoke 3D LiDAR viewer softwareParticipated in the NIATEC Collegiate Cyber Defense Competition as a member of the red team	

EDUCATION

Utah State University	Expected May 2026
<i>B.Sc. in Computer Science</i>	<i>Logan, UT</i>
<ul style="list-style-type: none">Vice President and regular speaker, Free Software and Linux Club	

PROJECTS

JoinLater <i>Python, D-Bus, SQLite, HTTP, WPA2 Enterprise Authentication</i>	
<ul style="list-style-type: none">Reverse engineered closed-source JoinNow software, USU's solution for connecting clients to eduroamUsed Python and SQLite to scrape data from JoinNow web portals to support software reverse engineering effortDeveloped JoinLater, a fully-functional open-source replacement for authenticating WPA2 enterprise supplicantsIterated on user feedback to improve reliability and compatibility across Linux distributions	
8-bit Breadboard Computer <i>TI 7400-series logic, Oscilloscope</i>	
<ul style="list-style-type: none">Used an oscilloscope to resolve unpredictable behavior caused by noisy clock signalCreated a Von-Neumann computer on breadboard with a custom instruction set using discrete logic ICsRecorded, edited, and published a video on YouTube to share challenges and findings	

TECHNICAL SKILLS

Languages: C, C++, Kconfig, Bash, Python, Assembly (ARM, Gameboy Z80)

Embedded/Kernel Tools: PetaLinux, Buildroot, Yocto, kgdb, systemd, udev, drm

Development Tools: b4, checkpatch.pl, git, Docker, Jenkins, Google Test, vcpkg, CMake, Agile methodologies