

SEASONED SOFTWARE ENGINEER, DATA HOUND AND BUG HUNTER RELOCATING TO NEW ENGLAND

EMPLOYMENT

Sr. SW Engineer MLCC Product Engineering **MKS | ESI** Portland, OR *Mar 2022
- Jun 2023*

- Owned architectural change to main processing application by merging multiple processes into one.
 - Implemented compile time C#/C++ interop message passing system with no code xml API.
 - Optimized OS Resource allocation for timing stability for soft real time capacitor test system.
 - Key customer went from having to restart computer daily to being able to run for weeks.
 - Project to double measurement output was able to meet MTTF requirements with this change.
- Wrote 560-unit tests, and increased code coverage by 6.5% in 1 year.
- Recovered devops infrastructure for multiple product families after ransomware attack.
- Did analysis, data mining, & visualization w/ Python on interdisciplinary investigation teams.
- Developed onboard automation turning a 4-hour SW upgrade into a few clicks.
- Presented and gave feedback for design reviews of innovative, high value system features.
- Clarified requirements and provided software expertise for large interdisciplinary team.

SW Engineer II MLCC Product Engineering **MKS | ESI** Portland, OR *May 2019
- Mar 2022*

- Implemented service to detect faulty peripherals causing OS timer corruption at large customer site.
- Added query features and trained users to mine useful data from customer manufacturing logs.
- Automated 14 hours of repeated oscilloscope performance testing of 100+ processes to 1 click.
- Developed modular simulation of manufacturing software for HALT testing of new subsystems.

SW Engineer I Laser Trim SW Engineering **ESI** Portland, OR *Jun 2018
- May 2019*

- Developed Computer Vision fitting algorithm with 5 µm positioning accuracy of custom probe cards.
 - Received Principles in Action Award for customer acceptance at large SEMI fab.
- Created real time PID oscillation detection, reporting & shutoff feature in for Galil DMC controller.
- Developed regression test plan for SEMI Laser Trim & Test system.

SW Lead Trickfire Robotics **University of Washington** Bothell, WA *May 2017
- Apr 2018*

- Primary designer and implementer of robotics software for NASA Robotic Mining Competition entry.
- Developed autonomous navigation system w/ C++, ROS Navigation Stack, and depth camera data.
- Implemented differential drive PID control system with ROS control stack and Arduino.

EDUCATION

B.S. in Computer Science and SW Engineering **University of Washington** Bothell, WA *Feb 2016
- May 2018*
Cum Laude, In-major GPA: 3.94

Engineering Prerequisites **North Seattle College** Seattle, WA *Sep 2014
- Feb 2016*
Laura G. Scudder Scholarship, DHL Scholarship

TECHNICAL EXPERIENCE**Projects:***collin-codes.azurewebsites.net*

- Portfolio Website (2023): React, Rust, WASM

Languages: C#, Python, PowerShell, C++**Technologies:** Git, Azure Devops, Ranorex, WPF, Numpy, WinForms, OpenCV, Cognex, ROS, Flask, Galil