Tyler Tiede

tylertiede@gmail.com | (716) 906-7915 | [linkedin](#) | [website](#)

Summary

Software engineer with 3+ years of experience in backend development, automation, and hardware-software integration. Applied Physics background with a strong problem-solving mindset. Seeking roles in software engineering focused on building scalable Python solutions and systems integration.

Skills

Languages: Python, C/C++, LabVIEW, PHP (Laravel), MySQL
Tools/Libraries: Excel, NumPy, SciPy, Matplotlib, PyTest, BS4, Pandas
Development: Jenkins, Perforce, Git, Crucible, Docker, Regression Testing, Failure Analysis
Interfaces and Protocols: Serial, I^2C, SCPI Instrument Control

Experience

Software Engineer, MKS Instruments – Rochester, NY · Jan 2022 – Nov 2024
- Designed and maintained Python-based regression test suites for RF plasma control systems used by major semiconductor fabs, improving release stability and confidence.
- Built an end-to-end test platform—including Arduino firmware, a Python interface, and GUI tooling—for validating I^2C communication with control boards, streamlining manual and automated testing workflows.
- Automated data parsing and report workflows, saving ~10 hours/week in manual analysis.
- Integrated serial comms with lab instruments (oscilloscopes, function generators, etc.) to enable autonomous testing workflows for complex RF generator firmware features.
- Diagnosed CI test bugs, improving reliability and reducing engineering support hours.

Optics Technician, Corning, Inc. – Fairport, NY · Aug 2021 – Dec 2021
- Assembled customer-bound opto-mechanical systems to meet quality and performance standards.
- Interpreted engineering drawings and QC specs to streamline assembly and inspection workflows.
- Collaborated with design engineers to reduce failure rates and improve throughput.

Assistant System Administrator, SUNY Geneseo – Geneseo, NY · Jun 2018 – Mar 2020
- Implemented electronic lock scheduling and card access restrictions for all campus buildings.
- Managed student card access for 6,000+ users and resolved access issues onsite and remotely.
- Assisted in developing web apps, including a campus emergency alert system and in house ticketing portal, using PHP, Laravel, and MySQL.

Projects

RF Generator Arduino Test Board · MKS Instruments
- Designed and implemented a versatile Arduino-based test board to emulate RF generator control systems, enabling automated validation of I^2C communication with minimal manual setup.
- Engineered the platform to support a wide variety of control board configurations, each with differing hardware protocols and behaviors.
- Developed embedded firmware to simulate complex I^2C command sequences and capture real-time telemetry for system verification and debugging.
- Built a standalone GUI tool for engineers to manually send commands and monitor board behavior during development and troubleshooting.
- Integrated the test board seamlessly into a large-scale, pre-existing regression testing suite—enhancing coverage and stability without disrupting established workflows.
- Enabled full automation of test cases in CI pipelines (Jenkins), supporting validation across multiple stages of development and production.

Education

State University of New York at Geneseo – BS in Applied Physics, Minor in Mathematics · May 2021