RYAN ALEXANDER SELTZER
Email: Ryan@Seltzer.tv
Phone number not provided via website

EDUCATION

The Pennsylvania State University, Penn State Behrend Electrical and Computer Engineering Technology, BS
Greater Altoona Career and Technology Center Oracle Academy/Cisco Academy
Altoona Area High School, Altoona, PA

SKILLS, TOOLS, AND TECHNOLOGIES

- **Languages:** C, C++, C#, Java, Python, SQL, VB.NET, COBOL
- **Tools & Frameworks:** RSLogix 500/5000, ESPHome, Git, Creo Parametrics, AutoCAD
- **Protocols/Hardware:** I2C, SPI, RS-232, Modbus, LIN, CAN, MQTT, Zigbee, PLC Integration, HMI Development

EXPERIENCE

Amphenol Advanced Sensors, R&D Engineer St. Marys, PA   3/2023 – PRESENT
- Spearheaded the R&D and launch of a new CO2 sensor, reducing time-to-market by **15%** through optimized validation protocols
- Full stack software developer for validation and functional testing new and emerging products
- Engineered a custom Hardware-in-the-Loop (HIL) interface using C#/SQL, improving data traceability and reducing testing errors by 25%.

New Pig, Product Developer Intern Altoona, PA   5/2021 – 8/2021
- Developed and executed comprehensive design qualification and reliability life testing (HALT/HASS) to validate new product performance against rigorous industrial standards
- Developed automated Excel-based tracking systems using VBA macros to manage field-test data and real-world product performance across multiple external vendor sites
- Conducted on-site field evaluations and visual inspections to perform Root Cause Analysis on product performance within diverse industrial environments

Lumax Industries, Product Developer Intern Altoona, PA   5/2018 – 8/2018
- Engineered custom lighting solutions using AutoCAD, translating complex client specifications into detailed technical schematics for manufacturing
- Managed technical documentation and version control for existing product lines, updating legacy drafts to reflect modern engineering revisions and production standards
- Performed full-system electrical integration and functional validation on newly fabricated units to verify performance against design benchmarks

Technical Projects
- Designed and maintained a localized smart-home ecosystem using Home Assistant, YAML, and Cloudflare subdomains, managing 50+ IoT nodes and custom networking protocols
- Engineered a real-time IoT data visualization system using an LED matrix to display server-side metrics (Plex, Home Assistant) and external API data (Weather, SMS) via a custom Python/C++ interface
- Developed a portable chemical sensing device utilizing an MQ-series semiconductor sensor; implemented custom calibration curves in firmware to convert raw voltage outputs into concentration metrics
- Designed and fabricated a miniaturized class-AB audio amplifier with integrated gain and tone control, optimized for high-input impedance (guitar pickups) and low-noise floor within a compact EMI-shielded enclosure
- Developed a dual-display User Interface (UI) to provide real-time game telemetry, score keeping via laser break, and automated audio feedback via an integrated microcontroller-driven sound system

References upon request