Daniel J. Schnieder

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Education

The Ohio State University — Columbus, OH
B.S. Computer Engineering (ECE), Minor in Signal Processing — *Aug. 2022 – May 2026*

Elder High School — Cincinnati, OH
High School Diploma (Honors) — *Aug. 2018 – May 2022*

Projects

Wireless Telemetry System for Solar Car | *Arduino, LoRa, React.js, Python, GitHub* — Sept. 2024 – Present

- Designing and implementing a wireless telemetry system to transmit CAN data from the solar car's battery management system and motor controller using MCP2515 and LoRa RYLR998 modules.
- Programming a Portena C33 and ESP32 to receive, parse, and transmit data across 5+ kilometers.
- Creating a web-based dashboard, using React.js and Python, to display real-time data, including battery performance metrics and motor statistics, enhancing analysis and diagnostics.
- Optimizing data transfer speed and stability to ensure low latency and high reliability in a racing environment.

Personal Portfolio Website (danielschnieder.xyz) | *HTML, CSS, JavaScript, GitHub* — Dec. 2024 – Present

- Developing a fully organized and responsive personal portfolio website to effectively highlight academic achievements, technical projects, and professional experience as a computer engineering student.
- Implementing interactive and dynamic elements using JavaScript to create an engaging user experience with smooth navigation and intuitive design.
- Utilizing GitHub for version control and deployment, ensuring continuous improvements and accessibility.

Extracurricular Activities

Buckeye Solar Racing (Telemetry Lead) — Aug. 2023 – Present
The Ohio State University — *Columbus, OH*

- Leads a team of five students to design an efficient telemetry system for the solar car that reads, parses, and transmits data from the solar car's battery management system and motor controller using CAN bus protocol.
- Participates in leadership meetings, presents progress to team weekly, meets strict deadlines, and works on the solar car at the Center for Automotive Research for 10-15 hours per week.
- Recruits and mentors new members, organizes workshops and info-sessions on telemetry, assigns tasks to develop their technical skills, and prepares them for future leadership roles within the team.

Open Source Club (Developer) — Aug. 2024 – Present
The Ohio State University — *Columbus, OH*

- Collaborates on open-source projects, focusing on coding, debugging, and deploying software solutions.
- Engages in workshops promoting open-source development and the use of free software in real-world applications.

Work Experience

ECE Laboratory Monitor — Jan. 2025 - Present
The Ohio State University — *Columbus, OH*

- Guides 50 students per session through hands-on experiments on topics like soldering and operational amplifiers.
- Demonstrates safe and proper use of lab equipment, such as oscilloscopes and function generators.
- Assists students with troubleshooting, questions, and feedback, while encouraging problem-solving skills.
- Oversees 40 workstations and grades 25 lab reports weekly, ensuring a productive and safe lab environment.

Technical Skills

Software: SOLIDWORKS, TinkerCAD, KiCAD, TopSpice, LabVIEW, Visual Studio Code, Eclipse, Code Composer Studio, Thonny, DrJava, GitHub, Oracle Virtual Machine, Godot Engine, GameMaker Studio

Hardware:Computer Hardware Assembly & Troubleshooting; CAN Bus Protocol; Serial Communications, Arduino, Raspberry Pi, ESP32, MCP2515, LoRa998; Circuit Design and Prototyping; Soldering and Crimping

Languages: Java, C/C++/Embedded C, Assembly, Python/MicroPython, JavaScript; German Language (CERF A2)

Coursework: Computer Architecture & Design, Advanced Digital Design, Microcontroller-Based Systems, Discrete Signals & Systems, Analog Systems & Circuits, Discrete Structures, Advanced C Programming