Eric Udlis

(+1) 920-602-4550 | udlis.eric@gmail.com | www.ericudlis.com | eudds

Education

University of Wisconsin - Madison *Madison, WI*

B.S. in Computer Engineering *May 2023*

- **Relevant Courses:** Digital Signal Processing, Microprocessor Systems, VSLI Design, C & Machine Organization, Testing and Testable Systems, Computer Vision, Robotics
- **Deans List:** 6/8 Semesters

Relevant Work Experience

Tesla *Palo Alto, CA*

Digital Signal Processing Software Development Engineer *July 2023 - Present*

- Implement high performance DSP algorithms in low powered embedded systems using C/C++
- Perform platform development including CAN, SPI, ethernet, and LIN drivers for Tesla Sensors
- Process and analyze sensor data using MATLAB and Python
- Create fast and efficient data pipelines for sensor performance data resulting in informative dashboards Establish and maintain HIL/SIL test setups for continuous validation

Digital Signal Processing Software Intern *September 2021 - May 2023*

- Perform DSP Algorithmic development in C/C++ for embedded platform
- Establish new unit and end-to-end testing framework with focus in regression, efficiency, and scalability
- Develop tools in Python to optimize and automate workflow
- Create documentation and train new interns

Extreme Engineering Solutions *Verona, WI*

Associate Software Engineer *January 2021 - August 2021*

- Develop software for automated test equipment for embedded systems based on quality and customer requirements
- Build a REST-API driven service that allowed for direct communication with products over a web interface
- Work with a team to develop software and contribute to the design of internal products to assist in manufacturing
- Read, understand, and trace schematics, PCB layouts, and documentation for embedded products

Center for High Throughput Computing, University of Wisconsin Madison *Madison, WI*

Research Computing Facilitation Assistant *May 2020 - January 2021*

- Develop data pipelines in Python and Bash to filter user data, detect trends, and optimize facilitation time
- Utilize Jupyter Notebook & MatplotLib to create reports on cluster usage and research group optmiziation

Undergraduate Extra-Curricular Organization Involvement

Badgerloop (Solar Car Team for Formula Sun Grand Prix) *Madison, WI*

President *Jan 2022 - June 2022*

- Lead a team of 60+ undergraduate students representing over 20 different majors to build a solar car to compete in the Formula Sun Grand Prix
- Fund raise, allocate, manage a budget of over $75,000 across 21 different subteams
- Serve as the face of the organization, communicate with sponsors, the university, and competition organizers
- Utilize Jira and Confluence to develop a project timeline and documentation to ensure functionality by end of the development process
- Developed processes, tools, and resources to streamline design, fabrication, and new member on-boarding

Badgerloop (Hyperloop Team for SpaceX Competition) *Madison, WI*

Software & Controls Team Lead *Sep 2018 - Dec 2021*

- Led a team of 5-10 undergraduate developers through hosted workshops and manage projects including:
- **Embedded Architecture Development** Designing the embedded software that runs the pod in C & C++. Includes utilizing an ARM micro-controller to interact with analog to digital converters, IO expanders, other analog sensors using various serial communication protocols. All controlled by an embedded Linux platform.
- **Hardware in the Loop Testing** A CI/CD pipeline that automatically deploys code to hardware and runs tests on them. Communicates with test equipment using custom written SCPI python drivers

Technical Skills

- **Software** - C, C++, Python, MATLAB, Bash, Linux, Java, Web Development
- **Hardware** - ARM Platforms, I2C, SPI, UART, CAN, SCPI, KiCad EDA,