Eric Udlis

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

Education

University of Wisconsin - Madison *Madison, WI*

B.S. in Computer Engineering & B.S. in Computer Science *Expected May 2023*

- **Relevant Courses:** Digital Signal Processing, Microprocessor Systems, Digital Synthesis & Design, C & Machine Organization
- **Deans List:** 4/6 Semesters
- **Co-Op Program:** Spring 2021 & Fall 2021

Work Experience

Tesla *Palo Alto, CA*

Digital Signal Processing Intern *Fall 2021 & Summer 2022*

- 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 programs using Python and Bash to filter user data, detect trends, and automate manual tasks
- Utilize Jupyter Notebook & MatplotLib to create reports on data trends
- Write and maintain documentation for tools & software products
- Collaborate with researchers to create user facing materials & optimize workflow

Extra-Curricular Organization Involvement

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

President *Jan 2022 - Present*

- 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:
- **Pod Control Dashboard** A Node.Js app that reads data from and sends commands to single board computers on the pod. Includes functionality to record testing data and export into MatLab, Python and Microsoft Excel
- **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
- **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. Responsibilities also include maintaining a state machine control program to run on a single board computer.
- **Bill of Materials and Finance ERP Web-App** A Node.js web-app that serves as the purchase requesting, approval, and ordering hub for around $50,000 worth of purchases a year. Includes Slack work-space integration

Technical Skills & Awards

- **Software** - C, C++, Python, Bash, Linux, Javascript (Serverside & Clientside), Java, Bash, Typescript, Web Development, Pandas
- **Hardware** - Raspberry Pi, Arduino, ARM MCUs, Xilinx MCUs, I2C, SPI, UART, SCPI, KiCad EDA
- **Awards** - Javascript HackerRank Certification (2020), Autodesk Inventor Certified User (2018), Microsoft Office Specialist (2017)