Eric Udlis

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Education

University of Wisconsin - Madison　　　　　　　　　　　　　　　　　　　　　　　*Madison, WI*
B.S. IN COMPUTER ENGINEERING & B.S. IN COMPUTER SCIENCE　　　　　　　　*Expected December 2022*

- **Relevant Courses:** Java Programming III, Embedded Programming and Organization, Signal Processing, Microprocessor Systems, Calculus III
- **Deans List:** Spring 2019, Spring 2020, Fall 2020

Work Experience

Extreme Engineering Solutions　　　　　　　　　　　　　　　　　　　　　　　　*Verona, WI*
ASSOCIATE SOFTWARE ENGINEER　　　　　　　　　　　　　　　　　　　*January 2021 - Present*

- 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

Fond du Lac Area United Way　　　　　　　　　　　　　　　　　　　　　*Fond du Lac, WI*
OFFICE INTERN　　　　　　　　　　　　　　　　　　　　　　　　　*May 2019 - January 2021*

- Maintain a GetConnected Volunteer Management System
- Gather and report on volunteer data with custom Excel scripts
- Write custom HTML and CSS modules to keep website updated with latest information
- Communicate with volunteers and agency partners to create media for marketing and donation campaigns
- Windows Server 2016 maintenance including Active Directory Management and Samba Shares
- Performed hardware upgrades on company computers including hard drive, ram, and motherboard replacements

Extra-Curricular Organization Involvement

Badgerloop (Hyperloop Team for SpaceX Competition)　　　　　　　　　　　　*Madison, WI*
SOFTWARE & CONTROLS TEAM LEAD　　　　　　　　　　　　　　　　　*Sep 2018 - Present*

- 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 Management 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

- **Computer Programming** - C, C++, Java, JavaScript/Node.js, Python, Bash, Typescript, Web Development, Pandas, Linux
- **Electrical Hardware** - Raspberry Pi, Arduino, ARM MCUs, I2C and SPI Drivers, KiCad Schematic and PCB Design, SCPI drivers
- **Awards** - Javascript HackerRank Certification (2020), Autodesk Inventor Certified User (2018), Microsoft Office Specialist (2017)