Madeleine (Maddie) Wisinski

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EDUCATION

Tulane University, New Orleans, Louisiana

- Majors: Engineering Physics (ABET) and Computer Science with a certificate in Computational Engineering

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WORK EXPERIENCE

Novanta **July 2024 - Present**

Manufacturing Engineer

- Resolve factory issues promptly by identifying the source problem and implementing a corrective action
- Analyze behavior of electronics using a multimeter and oscilloscope in the process of root cause analysis
- Develop a quick and detailed understanding of each SKU to strengthen the problem-solving process
- Revise the testing app for certain SKUs to reinforce longevity and reduce manual operations
- Design a fixture to automatically test a handheld scanning device using Arduino C++ in PlatformIO

Tulane MakerSpace **June 2022 - May 2024**

Fabrication Technician

- Solved engineering problems with students, faculty, and staff and guaranteed safe use of the MakerSpace
- Repaired and maintained machines, such as the Bambu/Creality 3D printers and Epilog Laser Engravers
- Trained and guided users on the correct and safe use of Epilog Laser Engravers

Northwestern Mutual **June 2023 - August 2023**

Software Engineer Intern

- Increased testing coverage to over 80% through unit, functional, and regression tests
- Analyzed issues with teammates while absorbing new concepts and methods
- Coordinated with teammates in an Agile environment on a large-scale frontend ReactJS application
- Utilized Git Version Control effectively in a complex code environment

Tulane University **January 2023 - May 2024**

Computing Concepts (MATLAB) Teaching Assistant

- Supported students through one-on-one learning for the basics of programming logic
- Assisted the professor by managing assignment grades and proctoring exams as well as occasionally teaching

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PROJECTS

Handheld Scanner Automatic Testing Fixture **December 2024 - Present**

Hardware & Firmware

- Develop a fixture that executes commands, replaces a manual testing procedure, and saves $46,000/yr in labor
- Collaborate with 2 teammates to effectively design a cohesive, widely-applicable testing fixture
- Analyze and compare data sheets of components to match desired functions and ESP32 MCU capabilities
- Utilize dual core to operate an I2C color sensor and an analog microphone simultaneously
- Implement a CI/CD pipeline process, as well as unit/functional testing using Unity for PlatformIO

Mesh Network Measurement Nodes **August 2023 - May 2024**

Team Leader, Lead Product Designer, & Firmware Engineer

- Led a team of 5 to design, manufacture, and deploy a mesh network of 100 custom sensors to aid reforestation
- Developed a reusable and testable firmware codebase for managing power, measurements, and communication
- Designed, iterated, and tested weatherproof sensor housings, emphasizing efficient manufacturing processes
- Awarded $4,000 in funding from Tulane University's Office of Academic Enrichment & Engineering Physics

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SKILLS

Programming: C, C++, Java, C#, Python, Arduino, JavaScript, NodeJS, ReactJS, CSS, HTML, MATLAB, Simulink Controls Systems, Git Version Control, Azure Web Apps, and OpenGL in C++
Machinery: 3D Printers, Epilog CO_2 Laser Engraver, CNC Mill & Lathe, Waterjet, and Woodshop & Metalshop Tools
Electronic Tools: Multimeter, Oscilloscope
Programs: Autodesk Fusion 360 (4 years), SolidWorks, Adobe Illustrator, and Microsoft Suite
Languages: English (Fluent), French (Intermediate)

ADDITIONAL INFO

Hobbies: Music, Guitar, Coding Personal Projects, Biking, Cooking, Baking, and Bread-making