

AMANDA LISS

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Education

University of Michigan

Master of Science in Engineering: *Electrical & Computer Engineering (VLSI & IC track)* May 2024

- Coursework: Analog ICs, Computer Architecture, Monolithic Amplifier Circuits, Advanced VLSI Design

Bachelor of Science in Engineering: *Biomedical Engineering major; Electrical Engineering minor* May 2023

- **3.83/4.00 GPA**
- Coursework: VLSI Design, Digital ICs, Introduction to Logic Design, Biomedical Instrumentation and Design

Work Experience

Integrated Circuit Design Intern | Raytheon June 2023 – August 2023

- Finished a single slope ADC cell in **Cadence Virtuoso** by customizing its analog mixed signal simulation testbench in **SystemVerilog** and updating its **layout**
- Validated the **signal integrity** of a post-ROIC channel for space applications using eye diagrams in SpectreX simulator
- Initiated schematic integration of FPGA and DDR DRAM in Altium Designer
- Analyzed **root cause corrective action** for temporal and spatial image degradations

Electrical Engineering Intern | Treetown Tech, LLC May 2022 – August 2022

- Consulted 4 companies in electronics across the automotive, environmental, MEMS, and medical imaging industries.
- Verified the **PCB and embedded system design** for Canada's next generation delivery vehicles' control module through ~175 tests involving:
 - CAN, LIN, SPI, & I2C communication
 - DC power supply and electronic load, custom test boxes, **oscilloscope, multimeters**, thermal camera
- Utilized **Altium Designer** for creating and reviewing schematics and PCBs
- Assembled electronics for MEMS IC calibration system by wiring, wire harnessing, and soldering

Research Assistant | University of Michigan Biomedical Engineering Department Aug. 2021 – May 2022

- Executed PCR, immunofluorescence, histology, imaging, and RNA isolation to reprogram stem cells for chondrogenesis in the treatment of articular cartilage degradation
- Embedded and sectioned samples of cartilage pellets

Projects

President | Pantanal Partnership, student project team Aug. 2020 – Current

- Coordinated and led month-long trip abroad in which we installed **solar power systems with A/C wiring** for 2 indigenous Amazon communities
- **Prototyped charge controller circuit and small-scale hydropower charger**
- Manage weekly team meetings, 4 large recruitment events per year, and internal and external communications

Software & Hardware Engineer | InvisiMouse, Medical Instrumentation Design Project Aug. 2021 – Dec. 2021

- Created an alternative method of computer cursor control that reduces hand strain to mitigate carpal tunnel syndrome
- Built a circuit of several band-pass filters and differential amplifiers to condition EMG signals
- Wrote **integrated MATLAB and LabVIEW software** to translate the analog signals into cursor action
- Other course projects included constructing a spirometer, EKG, and pulse oximeter