DAKOTA BRITTON

(210) 559-3784 · Dbrit@utexas.edu

EDUCATION

The University of Texas at Austin	**Master of Science, Electrical and Computer Engineering**	Dec 2024
	Bachelor of Science, Electrical and Computer Engineering	Aug 2023
	Current Cumulative GPA: 3.85	

Relevant Coursework: Fourier Optics, Computational MRI, Modern Optics, Ultrasonics, Linear Systems and Signals, Real Time Digital Signal Processing Lab, Convex Optimization, Embedded Systems Design Lab, Computer Architecture, Real Time Operating Systems, Software Design and Implementation

WORK EXPERIENCE

UT Computational Sensing and Imaging Lab – Graduate Research Assistant   Fall 2023 - Current
- Implemented and tested projection FSE sequence on 1T permanent magnet scanner
- Modified existing cartesian FSE sequences for acquisition and reconstruction with arbitrary phase encode order
- Met periodically with advisor and industry sponsor to report progress and discuss next steps

Cisco Systems – *Technical Intern*   Summer 2023, Summer 2022
- Designed and integrated modular RTL implementing RGB LED effects for the user interface of two major switch product lines
- Complied with timing closure requirements in RTL spanning multiple clock domains
- Utilized Xilinx drivers to create an example for communication between AXI I^2C controller and peripheral
- Validated RTL and I^2C communication using simulation, internal logic analyzers, and external oscilloscope
- Communicated with other design and marketing teams to negotiate requirements and assist with RTL integration
- Created and updated block diagrams, integration guides, and specifications for RTL
- Modified PowerShell and TCL scripts to improve Vivado workflow
- Updated schematic containing USB, LEDs, and connectors using Cadence Design Entry HDL
- Tested and reworked multiple different PCBs to validate hardware functionality and test potential fixes

ACTIVITIES AND PROJECTS

EE 445L Embedded Systems Project and Senior Design Project – *HUDset*   August 2021 - August 2023
- Prototyped and implemented optical system delivering 3D stereoscopic pairs to the user
- Created two iterations of a head-mounted heads-up display utilizing TM4C microcontroller
- Designed schematics and layouts for custom PCBs with LQFP TM4C, SMD components, and features for testing and JTAG
- Performed board bring-up tasks including hand-soldering components, flashing code, testing, and debugging

Longhorn Racing Electric – *Electronics Lead, Telemetry Lead*   August 2019 - August 2023
- Directed electronic development for formula-style electric race car for competition in Formula SAE
- Managed development of CAN-based vehicle telemetry system
- Developed custom PCBs containing power regulation, analog and digital signals, and MEMS devices using KiCad
- Conducted and participated in design reviews for PCB schematic design, layout, and documentation
- Assembled, debugged, and tested hardware using SMD hand-soldering, standard lab equipment, and test beds

ADDITIONAL INFORMATION

Software Design: C, C++, Java, Python, Matlab, Verilog, Git, Vim
Technical Skills: KiCad, Solidworks, Fusion, SMD Soldering and Rework, 3D Printing
Interests: Bass Guitar, Bouldering, Tennis, Electronic Projects
Work Eligibility: Eligible to work in the U.S. with no restrictions