

Caleb Patton

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EDUCATION

University of Nevada, Reno	Jan 2023 – Dec 2024
M.S. Mechanical Engineering	
University of Illinois, Urbana-Champaign	Aug 2018 - May 2022
B.S. Computer Engineering	GPA: 3.77/4.0

RELEVANT PROJECTS

x86 Operating System – (C)	Spring 2020
<ul style="list-style-type: none">Implemented Page Tables, System Calls and Keyboard Interrupts for x86 processor using C and x86 AssemblyWrote a driver for a custom game controller that displayed elapsed level time and controlled the motion of a player through an RS232 serial port	
RISC-V Microprocessor – (SystemVerilog)	Spring 2022
<ul style="list-style-type: none">Designed a custom 5-stage pipelined microprocessor for the RV32IMC ISA using SystemVerilogUsed SystemVerilog and Modelsim to implement and demonstrate functionality of RV32I ISA	
FPGA Arcade Game – (SystemVerilog)	Fall 2020
<ul style="list-style-type: none">Implemented a ‘Galaga’ style game with multiple levels, enemy AIs and a Boss fight on a DE-10 Lite FPGA	

EXPERIENCE

Graduate Research Assistant – <i>University of Nevada, Reno</i>	Jan 2023 - Present
<ul style="list-style-type: none">Aided in the research and development of mapping and localization software for autonomous aircraft	
Computer Vision and Robotics Intern – <i>Brunswick Corporation, Champaign, IL</i>	Feb 2021 - Dec 2021
<ul style="list-style-type: none">Optimized performance of C++ code for scientific computing to support autonomous boating simulationsUsed SPI protocol to create a demonstration of the mapping capability of multiple mobile robotics platforms	
Software Engineering Intern – <i>Xaptum Inc. Chicago, IL</i>	Jan 2020 – Aug 2020
<ul style="list-style-type: none">Learned Erlang to develop a prototype Anomaly Detection/Notification systemDetected anomalous connection requests using the Isolation Forest and Logistic Regression Algorithms	

TECHNICAL SKILLS

Programming	Software	Manufacturing	CAD
Python	PyTorch	3D Printers (FDM, SLA)	Fusion360
C/C++	Deep Learning	Laser Cutter	NX 12.0
	ROS	Soldering	
	Docker		