

TOMAS MCMONIGAL

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EDUCATION

Oregon State University

Senior Undergraduate

Honors Bachelor of Science

Major in Electrical & Computer Engineering, Minor in Computer Science

OSU GPA: 3.72

Degree Anticipated June 2020

TECHNICAL STRENGTHS

Computer Languages

C/C++, Assembly, Bash, Python, SystemVerilog

Software & Tools

Embedded Systems, OpenGL, L^AT_EX, Linux, Intel Quartus, Matlab, Qt

RELEVANT COURSES & PROJECTS

- Microcontroller System Design
- VLSI System Design
- Multimedia Systems
- Computer Architecture
- Wireless Communications
- Software Engineering
- Operating Systems
- Computer Graphics

Honors Thesis Project & Robotics Club - Aerial Team

Fall 2019 - Present

Currently working on the development of an automated hexacopter for the AUVSI SUAS 2020 competition. One of the main challenges is to make the drone fly itself through a virtual obstacle course. My task is to program the autonomous motion software and create a 3D GUI to the display the flight path - using C++ and Qt. The GUI will also make use of the telemetry system to display it's current position in real time. Professor Robin Hess is my mentor for this project.

Senior Design Project

Fall 2019 - Present

After building a USB Oscilloscope for my Junior Design Project, Intel contacted my partner and I through their FPGA Academic Program to offer their sponsorship. Leah Lindblom from Intel's Product Marketing Department in San Jose currently serves as our client for our Senior Design Project, a Digital Storage Oscilloscope. The main goal is to increase the sampling rate from 1 Msps to 10 Msps and output to an LCD touch screen connected to the DE1-SoC Development Board.

WORK EXPERIENCE

Teaching Assistant

January 2018 - December 2018

Electrical Fundamentals

- Led two lab sections with 24 students each
- Held office hours for a class of 300+ students and graded exams, quizzes, and lab reports

ACADEMIC ACHIEVEMENTS

OSU Honor Roll - Fall 2017, Winter 2018, Spring 2018, Fall 2018, Winter 2019, Spring 2019, Fall 2019

Glenn Holcomb Scholarship - Awarded for the 2017-2018 school year

Knaus Electrical Engineering Scholarship - Awarded for the 2018-2019 school year

Ritter, T Scholarship - Awarded for the 2019-2020 school year

PERSONAL SKILLS

Languages Fluent in English and Spanish

Soft Skills Problem Solver, Team Player, Energetic, Enthusiastic, Excellent Communicator