

Alexander J. Witthus

GPA: 4.0 | US CITIZEN

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OBJECTIVE

May 2023 Electrical Engineering M.S.E. graduate seeking a full time opportunity in hardware and related fields.

EDUCATION

Arizona State University, Tempe, AZ – Electrical Engineering M.S.E.

August 2021 - May 2023

Member of the 4+1 accelerated master's program, specializing in electronic and mixed signal circuit design. Completed graduate courses during the Electrical Engineering B.S.E program.

Barrett, the Honors College @ Arizona State University, Tempe, AZ – Electrical Engineering B.S.E.

August 2018 - May 2022

Completed Honors thesis and Electrical Engineering B.S.E., graduated Summa Cum Laude, received the Moeur Award and the Spring 2022 Fulton Impact Award.

WORK and EXPERIENCE

Intel Corporation, Chandler, AZ – ASIC APR Technology Development Intern

May 2022- December 2022

Joined the ASIC PDK Development Team at Intel Corporation as a Graduate Technical Intern.

General Dynamics Mission Systems, Scottsdale, AZ – ASIC/FPGA Engineer Intern

May 2021 - April 2022

Joined the ASIC/FPGA Center of Excellence, studied the JESD204C spec, performed RTL prototyping for size and timing estimates, drafted ASIC Design Document sections, drafted microarchitecture for JESD Transmitter Transport Layer.

General Dynamics Mission Systems, Scottsdale, AZ – Systems Engineer Intern

June 2020 - August 2020

Joined the Orion Rocket Emergency Communications Radio project, leveraged knowledge from previous GD contracts to draft a technical memo demonstrating compliance with customer specifications. Communicated with vendors to procure test parts.

PROJECTS

Senior Design Capstone – Speech-based Parkinson's Disease Machine Learning Model

Optimization of an existing pathogen classification model for detection of Parkinson's Disease using speech data under Dr. Visar Berisha of ECEE.

Fulton Undergraduate Research Initiative – Arduino-based, GPS-disciplined timing reference

Development of an Arduino-based, GPS-disciplined, low-power timing reference for measurement devices under Dr. David R Allee of ECEE.

Project Metal Gear – Automated Home Defense Turret

Prototype of an automated, object tracking turret using Arduino and PixyCam. Included programming in Arduino, documentation work, and troubleshooting.

TECHNICAL SKILLS

Programming: C++, Arduino, MatLab, Python, TCL, SystemVerilog.

Version Control: Git, GitHub.

Digital Logic Design: ModelSim, Vivado, Quartus Prime.

Circuit Design: LTspice, Cadence Virtuoso, Cadence Innovus.

General: Linux, Microsoft Office Suite.

RELEVANT COURSES

Digital Systems and Circuits & VLSI Design

Analog Integrated Circuits & Advanced Analog Integrated Circuits

Constructionist Approach to Hardware Design.

Machine Learning Basics with Deployment to FPGAs.

Digital Signal Processing / Real-Time DSP

AWARDS

ASU President's Award

National Merit Scholar

8x Dean's List (3.5+ Semester GPA)

Moeur Award (4.0 GPA upon graduation)

2022 Fulton Impact Award

Boeing Scholarship

Bidstrup Foundation / Barrett Research Fellowship Grant

SERVICE

Barrett, the Honors College, Tempe, AZ— *Peer Mentor*

August 2021 - May 2022

Member of a peer mentorship program within Barrett, advising a group of 17 first year students, planning monthly community events, and communicating weekly via newsletters.

School of Electrical, Computer and Energy Engineering, Tempe, AZ— *ECEE Ambassador / Student Mentor*

August 2019 - December 2022

Member of a volunteer program within ECEE, volunteered at events in the advising center facilities such as First Time Freshman Orientation, ASU-101 classes, Fall Welcome, etc.

ACTIVITIES and FUN FACTS

Toastmasters International, Intel Innovators

July 2022 - December 2022

Member of the Intel Innovators Toastmasters International Club.

2022 Boston Marathon Finisher, Boston, MA

April 2022

Competed in the 2022 Boston Marathon. Finished with an official time of 2:46:44, placing 995th overall, 947th for men, and 779th in my division.

Turkish Language Learner, Duolingo

May 2021 - Present

Actively pursuing fluency in the Turkish language through the Duolingo App. Consistently practice every day with an active streak that began in May 2021.