



EDUCATION

Auburn University
Graduation May 2020
Bachelor of Computer Engineering

August 2016 – Present
GPA: 4.0/4.0

RELEVANT EXPERIENCE

MIT Lincoln Laboratory
Student Technical Researcher

August 2019 – Present
Auburn, AL

- Developing an American Sign Language dictionary to be used for machine learning algorithms in order to create a translation architecture for fluid conversations between signing and spoken English.

Research Intern

May – August 2019
Lexington, MA

- Studied radar principles and physics in order to develop MATLAB tools that model wind turbine clutter for the Intelligence, Surveillance, and Reconnaissance Systems & Architectures group.
- Analyzed the interference of wind turbines on radars. Compared simulation to real data collected in the field to confirm model accuracy.
- Created "ENVOY", an American Sign Language translating tool as part of the Intern Innovative Idea Challenge. Secured laboratory funding to continue research and development of the project.

Auburn Department of Electrical and Computer Engineering
Undergraduate Research Assistant

September 2018 – Present
Auburn, AL

- Integrating an embedded system to steer a laser communication payload on the Quantum Encrypted Satellite based Transmission (QUEST) project for the Air Force University Nano-satellite Program.
- Penetration and vulnerability testing on a radar for the Army through Dynetics Inc. (a defense contractor). Processed files and constructed pathways to disrupt normal radar operation.
- Performed research for the National Oceanic and Atmospheric Association on GlobalSense as a part of development for disposable environmental probes.
- Tested a retro-directive antenna array to be used in communication systems. Researched topologies for the IC board in order to minimize the area and lower the power usage of the design.

The Boeing Company
Space Launch System (SLS) - Avionics

June – August 2015
Huntsville, AL

- STEM intern for the avionics division of the SLS program. Performed research for different parts of the rocket, including the Flight Safety Systems (FSS).
- Consolidated hardware engineering data from various stages of the rocket and tracked test results as well as location data.

PRESENTATIONS & TALKS

R. McGill, *Wind Turbine Impact on Air Surveillance Radar: Simulation and Models*
Lexington, MA – August 5th & 9th 2019

- MIT Lincoln Laboratory Summer Research Talks

R. McGill, E. Dietrich, E. Mitchell, A. Patel, M. Goldwater, K. Leong, R. Martel, *EN-VOY: Enabling Natural-language Versatility and Opportunity*
Lexington, MA – July 16th & 26th 2019

- First Place Overall, MIT Lincoln Laboratory Intern Innovative Idea Challenge Final Round
- Best Poster Award, MIT Lincoln Laboratory Intern Innovative Idea Challenge Round Two

Ryan McGill

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TECHNICAL STRENGTHS

Computer Languages	Java, C++, C, MATLAB, Python, ARM based assembly, VHDL, Verilog, RISC-V
Hardware & Software	Oscilloscopes, Network Analyzer, Tiva-C Launchpad, Xilinx Vivado, LaTeX, some SOLIDWORKS, NI Multisim, LTspice IV, XPression

ACADEMIC ACHIEVEMENTS

- Eta Kappa Nu Electrical & Computer Engineering Honor Society
- Phi Kappa Phi National Honor Society
- Tau Beta Pi National Engineering Honor Society
- Dr. Phillip W. Lett Endowed Scholarship
- H.K. Porter Endowed Scholarship
- Spirit of Auburn Presidential Scholarship
- Marshall Keith Jr. Memorial Scholarship
- Dean's List (Fall 2016 – Spring 2019)

RELEVANT COURSEWORK

- Microelectronic Fabrication Lab (Fall 2019)
- Digital Signal Processing (Fall 2019)
- Digital System Design Lab
- Embedded System Design Lab
- Computer Architecture & Design (Fall 2019)
- Introductory Quantum Physics & Relativity (Spring 2020)
- Information Networks & Technology

EXTRACURRICULAR

- Society for Engineering Executive Development
 - Established a professional development club for all engineers. Topics range from graduate school applications to negotiating interviews that are taught by industry professionals.
 - * Founder and Vice President (May 2018 – Present)
- Cupola Engineering Ambassador
 - Giving tours to prospective engineering students as well as notable alumni. As High School Chair, maintaining database of current College of Engineering information and tour routes.
 - * High School Relations Chair (February 2019 – Present)
 - * Member (January 2018 – January 2019)
- Auburn University Dance Marathon
 - Maintained and created pages for the main website. Created a web-app for users to keep up with main event schedule, check-in, and receive notifications on events.
 - * Assistant Director of Technology & Development (February 2017 – February 2018)
 - * Committee Member (September 2016 – January 2017)