RYAN MCGILL

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EDUCATION

Auburn University   *August 2016 – Present*
Graduation May 2020   GPA: 4.0/4.0
Bachelor of Computer Engineering

RELEVANT EXPERIENCE

MIT Lincoln Laboratory   May 2019 – Present
Research Intern   *Lexington, MA*

· Analyzing the effects of wind turbines on air surveillance radar for the Intelligence, Surveillance, and Reconnaissance Systems and Architectures division at MIT Lincoln Laboratory.
· Developing MATLAB tools that model radar clutter generated by wind farms. Studying radar hardware and electromagnetic effects to better model radar returns over wind farms.
· Created "ENVOY", an American Sign Language translating tool as part of the Intern Innovative Idea Challenge. Utilizes computer vision and deep learning in order to allow two-way conversations in ASL.

Department of Electrical and Computer Engineering   September 2018 – Present
Undergraduate Research Assistant   *Auburn, AL*

· Penetration and vulnerability testing on a radar for the Army through Dynetics Inc. (a defense contractor). Currently processing files and constructing pathways to disrupt normal radar operation.
· Performing research for the National Oceanic and Atmospheric Association on GlobalSense as a part of development for disposable environmental probes.
· Testing a retro-directive antenna array to be used in communication systems. Researching topologies for the IC board in order to minimize the area and lower the power usage of the design.

The Boeing Company   June – August 2015
Space Launch System (SLS) - Avionics   *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 2019
· In preparation, MIT Lincoln Laboratory Intern Research Talk

R. McGill, E. Dietrich, E. Mitchell, A. Patel, M. Goldwater, K. Leong, R. Martel, *ENVOY: Enabling Natural-language Versatility and Opportunity*
Lexington, MA – July 16th 2019
· In preparation, MIT Lincoln Laboratory Intern Innovative Idea Challenge Round Two

TECHNICAL STRENGTHS

Computer Languages	Java, C++, embedded C, MATLAB, Python, ARM based assembly, VHDL, Verilog
Hardware & Software	Oscilloscopes, Network Analyzer, Tiva-C Launchpad, Xilinx Vivado, 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)

- Computer Architecture & Design (Fall 2019)
- Digital System Design Lab

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)