

# RYAN MCGILL

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## EDUCATION

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**Auburn University**  
Graduation May 2020  
Bachelor of Computer Engineering

*August 2016 – Present*  
GPA: 4.0/4.0

## RELEVANT EXPERIENCE

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**MIT Lincoln Laboratory**  
*Research Intern*

May 2019 – Present  
*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. Utilizes computer vision and deep learning in order to allow two-way conversations in ASL.

**Department of Electrical and Computer Engineering**  
*Undergraduate Research Assistant*

September 2018 – Present  
*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**  
*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

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**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, *EN-VOY: Enabling Natural-language Versatility and Opportunity***  
*Lexington, MA – July 16th & 26th 2019*

- In preparation, MIT Lincoln Laboratory Intern Innovative Idea Challenge Round Three
- Best Poster Award, MIT Lincoln Laboratory Intern Innovative Idea Challenge Round Two

## TECHNICAL STRENGTHS

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### 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

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- 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

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

## EXTRACURRICULAR

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- 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)