

BRIAN LOUGHRAN

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EDUCATION

Lehigh University

B.S. Mechanical Engineering with Honors
Minor in Aerospace Engineering
Minor in Business

2013 - 2017

GPA - 3.5

EXPERIENCE

Pratt & Whitney

Software Engineer, Compression Systems Engineering

July 2017 - Present

East Hartford, CT

- Applied test driven development to build desktop application and workflows for DART (Deterministic Airfoil Response Tool), a tool used by airfoil structures to reduce time for design iterations.
- Employed Agile framework and scrum to develop a lightweight file inspection package within the environment of Airfoil 2.0 (an automated inspection tool for measured manufactured airfoil sections).

Lehigh University

Research Assistant

January 2017 - May 2017

Bethlehem, PA

- Utilized finite element analysis in ADINA to model the structural integrity in the healing zone of sheep tibia. Element octahedral and hydrostatic strain values used to evaluate predicted tissue behavior in the callus zones. End of semester presentation awarded 1st prize out of 6 research teams.

Pratt & Whitney

Process Engineer, Cold Section Engineering

June 2016 - August 2016

East Hartford, CT

- Built and implemented a classification tool for data re-use of over 18,000 high volume external jet engine components. Successfully campaigned across numerous groups to gather support resulting in \$25,000 in funding for cross-organizational implementation of the tool as standard work.

Aesculap Spine

New Product Development

January 2016 - December 2016

Center Valley, PA

- Worked in a team of five to create a medical grade parallel distracter device for surgical repair of degenerative disc disease in the lower spine. Thorough business case built for the product, including working prototype, FEA analysis, IP research, cost estimate and cash flow forecast.

Alcatel-Lucent Bell Labs

Thermal Design Engineer

June 2015 - August 2015

Providence, NJ

- Designed and fabricated a wind tunnel for thermal flow characterization over advanced 4G LTE and eventual 5G products. Thermal chamber testing employed to determine the maximum rated temperature. Acoustic testing of noise levels performed on cooling fans in fully anechoic chamber.

Lehigh University

Teaching Assistant

August 2014 - December 2014

Bethlehem, PA

- Supported professor in teaching MATLAB and Arduino programming languages in Lehigh University's Applied Engineering Computer Methods class. Bi-weekly responsibilities included assisting students in analysis and debug of hardware and software components of electro-mechanical systems.

LEADERSHIP

Treasurer (*Lehigh Ice Hockey*)

August 2014 - May 2017

- Budgeted team funds of \$80,000, and forecasted future costs to ensure smooth operation of the club.

Presentation Day Coordinator (*Alcatel-Lucent*)

August 2015

- Elected by fellow interns to organize and host the end-of-summer intern presentations.

Intellectual Development Chair (*Kappa Sigma, Beta Iota*)

April 2014 - October 2015

- Introduced 5 bi-annual scholarships to recognize students of high academic standing.

TECHNICAL SKILLS

Computer Languages

Python, Java, C/C++, MATLAB

Solid Modeling

SolidWorks, NX, Pro/Engineer

Finite Element Analysis

ADINA, ANSYS, Autodesk Mechanical

Tools

Github, Zenhub, Arduino LabVIEW, SIMULINK