



BRENDAN HIGGINS

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EXPERIENCE

GE Aviation (Lynn, MA)

Edison Engineering Development Program

Machine Learning & Controls Engineer

Jan. 2017 – Oct. 2017

- Developed engine health monitoring software to predict and isolate engine failures with Python's Pandas and Scikit-Learn libraries
- Rigorously tested software in all areas of flight envelope with 90% success rate
- Integrated machine learning model and live web interface to expedite flight testing using Angular and Polymer
- Designed, debugged and tested military helicopter engine control logic prior to software release

Mechanical Hardware Design Engineer

Jul. 2014 – Aug. 2016

- Redesigned starter gear and gearbox housing to save \$275/engine and \$2500/engine
- Spearheaded development of internal ultrapolish process projected to save \$1000 per part and 5 days of cycle time
- Performed extensive trade studies on fan blade containment
- Redesigned more durable compressor variable geometry linkage to save \$800/engine
- Led root cause analysis of composite delamination and developed interim containment plan

EDUCATION

Boston University – May 2017

Master of Science - Mechanical Eng
Robotics Specialization - GPA: 3.65

Cornell University – May 2014

Bachelor of Science - Mechanical Eng
Graduated Cum Laude - GPA: 3.62

PROJECTS

Boston University

March Madness Predictions

Spring 2017

- Tested numerous machine learning models in Scikit-Learn; final model would place top 13% on Kaggle
- Performed rigorous feature engineering on basketball metrics

Optical Character Recognition

Spring 2017

- Developed deep neural net classifier in Tensorflow that achieved 94% accuracy on 52 upper/lowercase letters

Robot Motion Planning

Fall 2016

- Detected and classified natural objects in aerial image using SVM in MATLAB
- Implemented A* algorithm to plan optimal path for autonomous robot

Cornell University

Formula SAE Project Team

Fall 2011 – Spring 2014

- Designed oil pump that saved 2 lbs. and won 2nd place (\$500) for Altair's Innovative Intelligence Award
- Lubrication Subteam Leader