### Spring 2018 Research Plan

1) **Write a brief outline of your research plan:**

There is a great need for improving in-flight data acquisition methods as well data processing methods. Such methods are useful for the development of flight testing and flight automation such as UAVs. My particular project is automate the processing of flight data into meaningful models of the aircraft.

The first step of the project is to write MATLAB code that can automatically read in csv files of flight data. This will involve learning how to use MATLAB to process data and store them into appropriately sized arrays automatically.

Once csv files can be successfully read in and stored, the next step would be to apply data mining techniques so that the data can be cleaned and manipulated to provide useful insight. This not only would involve statistical analysis but also the implementation of a graphic user interface so that front-end usage is quick and efficient. This part of the project will involve learning how to use statistical functions in MATLAB and how to code a graphic user interface.

By the end of the project, the hope is to have MATLAB code that allows for the efficient analysis of multiple flight data files that can then be used to build models of various aircraft.

2) **What do you hope to learn and achieve by the end of the semester?**

I hope to learn how to use MATLAB for basic data mining and how to implement a graphic user interface. I also hope to learn a good deal about the nature of aircraft and UAVs.