Lt David Crow

Activity Report 3

28 April 2019 – 18 May 2019

Week 1

* Met with Dr. Graham about CSCE 623 project
  + Going to use AFRL’s AVAS to generate airplane dataset consisting of orientation, position, and speed values
  + Experimented with AVAS to better learn the system
  + Scheduled meeting with Tracy Burchett at AFRL to adjust source code for my own use
    - Specifically, I need to output desired values to a log file
    - Tracy emailed a few suggestions, so we may cancel the meeting if I can update the code myself
* Submitted project proposal to Dr. Borghetti (attached)
* Should consider publication avenues
* Decided to go a different route with CSCE 686 project
  + Design an algorithm to effectively route UAVs through hostile terrain so as to maximize surveillance and minimize risk
  + Not relevant to thesis, but that’s okay
* Did not meet five articles/week goal
  + Will attempt to meet next week’s goal and make up for this week’s missed articles in the next few days

Week 2

* Met with Dr. Borghetti about his project proposal feedback
  + His feedback indicated that predicting flight maneuvers is not a very valuable machine learning project
  + Suggested I consider other options
    - Not really enough time for this
  + Alternatively, fit the model as planned (to my characterizations) and identify relevance/utility
* Met with Buddy Schneider at AFRL
  + Answered my AVAS questions
    - How do I output the variable watch window values?
    - Can I start the simulator at any given state (instead of just takeoff)?
    - Does the simulator accept pedal (yaw) input?

Week 3

* Out of town 5/17-5/18
* Successfully modified AVAS source code to allow for parameter filtering and file output
* Collected 5,000 simulator data points and began machine learning process
* Met with Dr. Graham about thesis committee
  + Mostly leaning toward Dr. Borghetti and Col Sweeney
    - Need to speak with Col Sweeney to learn more about his research area
* Started working on thesis prospectus; intend to finish this next week