Homework 4

Video: https://youtu.be/_kgZ6RL1gaw

Self-Assessment: 100 points out of 100

Notes:

The video will show several things. First the calculated transfer functions, linearized state space matrices, eigenvalues, natural frequencies, and damping ratios. Next a demonstration of trimmed flight is shown. As can be seen my aircraft holds its flight in the desired configuration until numerical error accumulates. Finally, for speed, the animation is turned off and the simulation is rerun with disturbances that demonstrate the different modes which are dependent on the derived eigenvalues. Plots are shown that demonstrate the response (settling time and frequency) of each mode. As can be seen my simulated aircraft demonstrates the proper open loop response.