**AE443 Spring 2021: WSR Report**

**From: Alan Rice**

**Team Name: Dragon**

**WSR #X**

**Date: 02/11/2021**

**Subject: Aerodynamics**

**Accomplishments:**

Did research on which airfoils make good choices for our mission envelope. Selected the set of NASA LS(1)-xxxx and MS(1)-xxxx airfoils as a provisional choice. Compared them to NACA 4 digit airfoils in XFOIL, and analyzed their performance in a 3d wing with and without plain flaps in XFLR5. Worked with Ian and Wanzheng on refining our airfoil choices.

**Problems:**

We do not have a tool that lets us analyze multi-element airfoils like slotted flaps.

**Plans:**

Look into openVSP or possibly even MSES to get a better idea of what slotted flaps can provide for us.

**Data/Information Required:**

MSES academic license / vsp airfoil tutorial.

**Help Requested:**