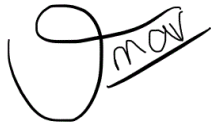


## **Umar Sajjad 6 Month Work Progress**

- Operationalized the DAFOAM optimization framework for unstructured meshes, as Mach-Aero was only applicable to structured meshes.
- Deployed the DAFOAM framework on HPC to leverage high-performance computing, as the computational requirements for high-fidelity aircraft optimizations exceed workstation capabilities.
- Performed optimizations on a general aviation aircraft (A380), focusing on wing structure optimization in the presence of the fuselage and tail components.
- Conducted airfoil optimizations on JF-17 and F-16 airfoils to improve performance at high angles of attack and reduce pitching moment (CMo).
- Currently working on operationalizing the framework for fighter aircraft.

Umar Sajjad

A handwritten signature in black ink, featuring a stylized 'U' and 'S' followed by the letters 'm' and 'ov'.