Muhammad Ali Naeem, 6 Month work progress

- Modified and ran the DAFOAM optimization framework for unstructured meshes
- Integration of a body-fitted FFD (Free-Form Deformation) box into the framework
- Performed optimizations on a general aviation aircraft (A380), focusing on wing structure optimization in the presence of the fuselage and tail components.
- Modifications to the DAFOAM framework code for exporting geometry in the required format and updating functional components.
- Conducted airfoil optimizations on JF-17 and F-16 airfoils to improve performance at high angles of attack and reduce pitching moment (CMo).
- Study the effects of different objective functions on optimized results for JF-17 and F-16 airfoils
- Validation of Mach Aero results with ANSYS Fluent for JF-17 and F-16 airfoils.
- Currently working on validation of DAFoam framework for fighter aircraft (JF-17) with wind tunnel results.

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