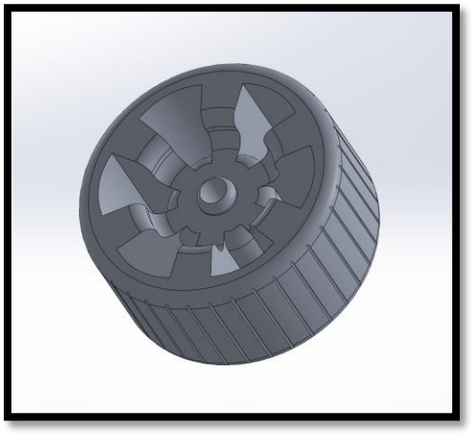
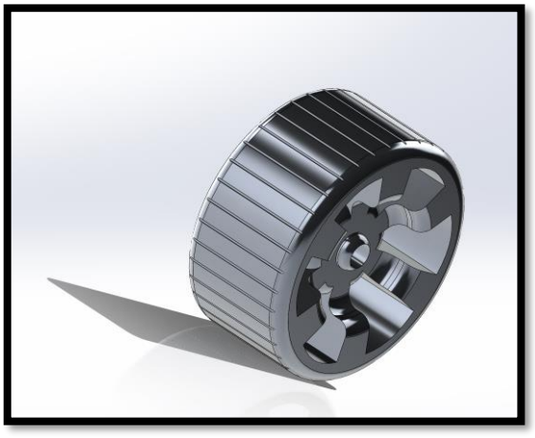
Design Portfolio

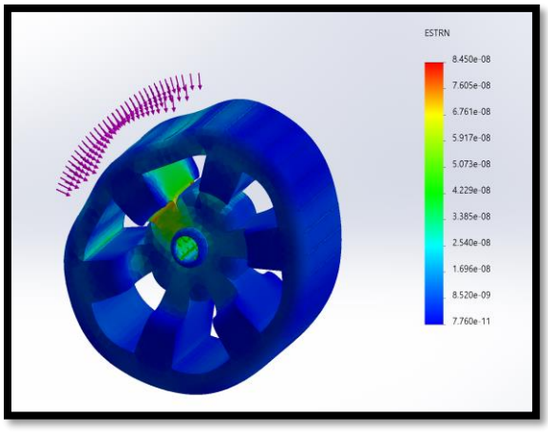
Project 1: FEA analysis on automotive wheel



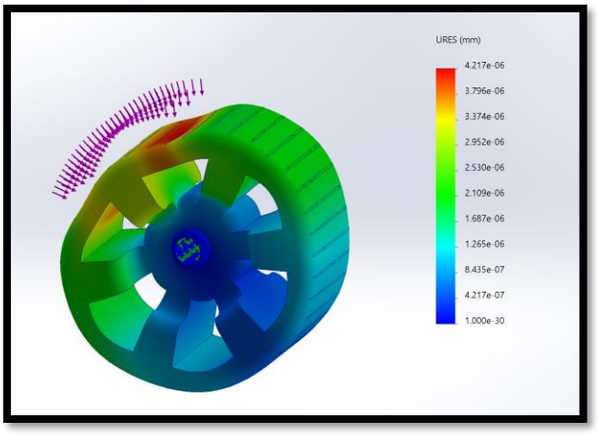


FEA result:

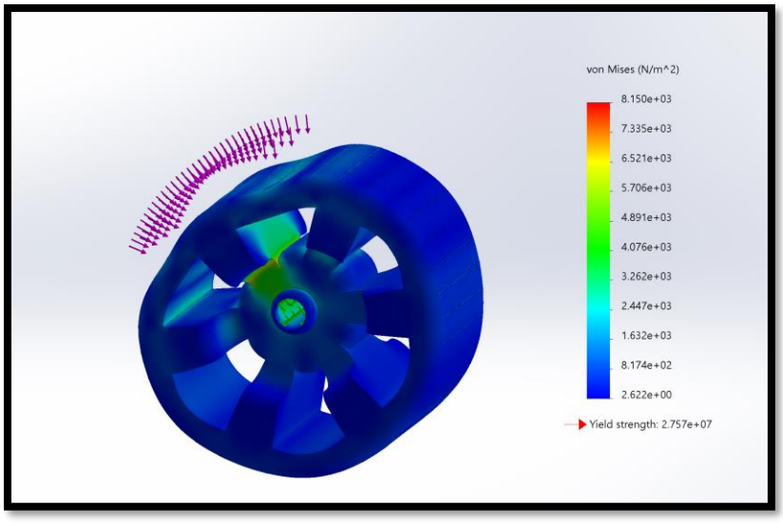
Strain:



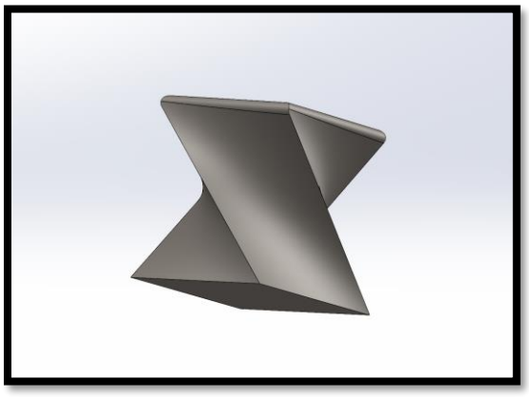
Displacement:



Stress:

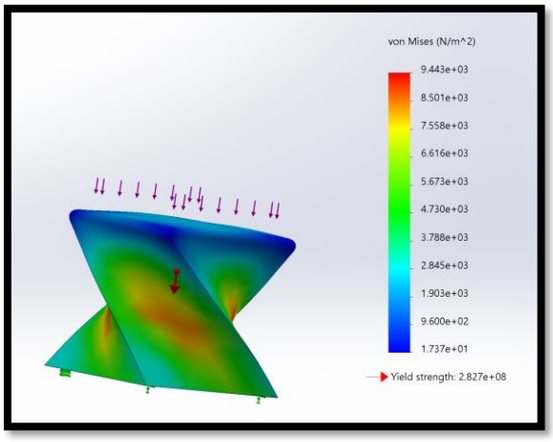


Project 2: Stress analysis on a complex design table put under continuous load

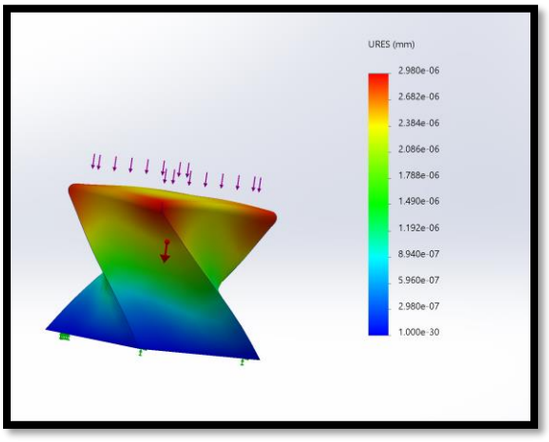


FEA result:

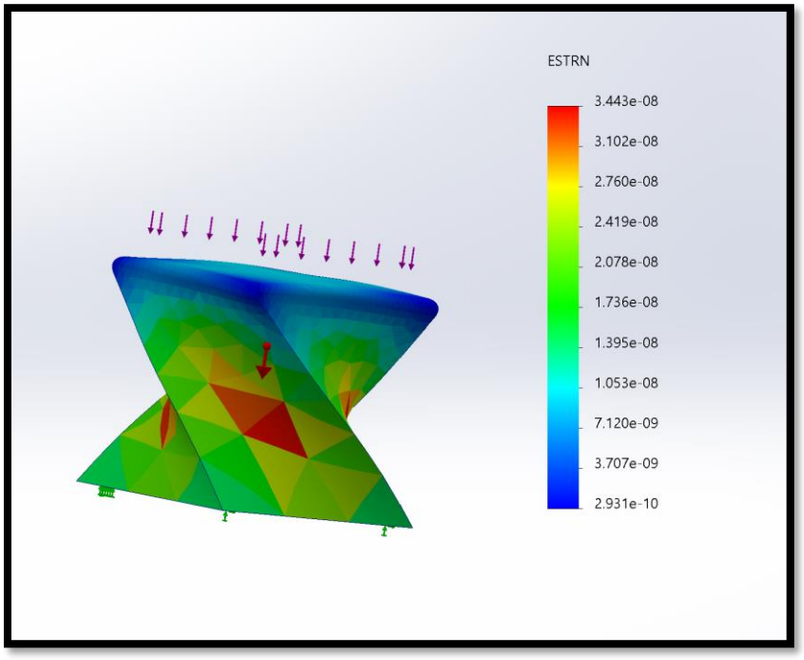
Stress:



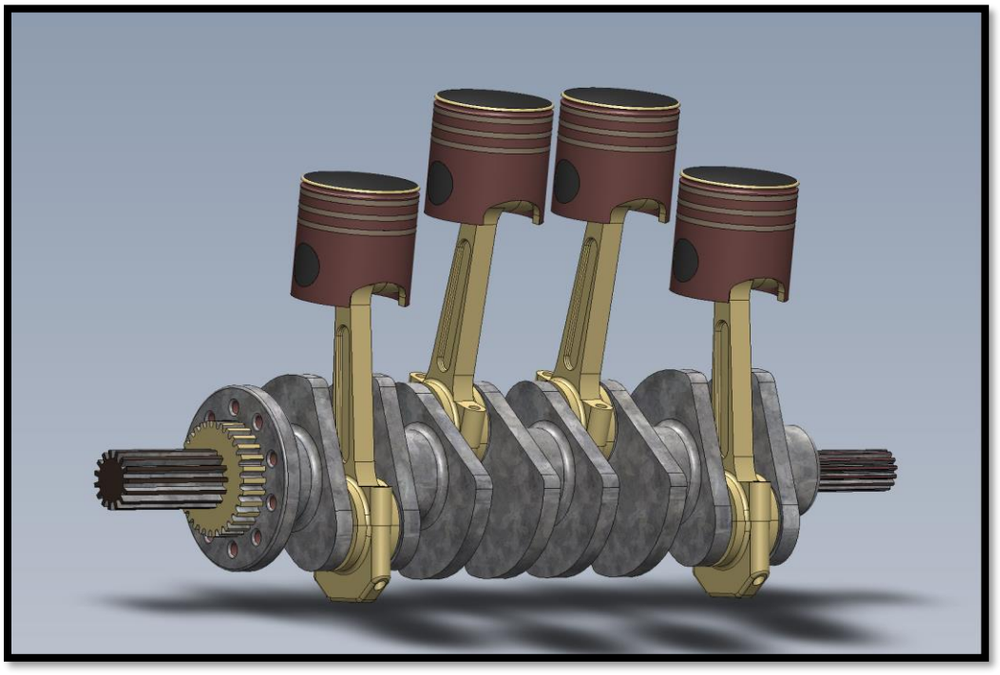
Displacement:



Strain:

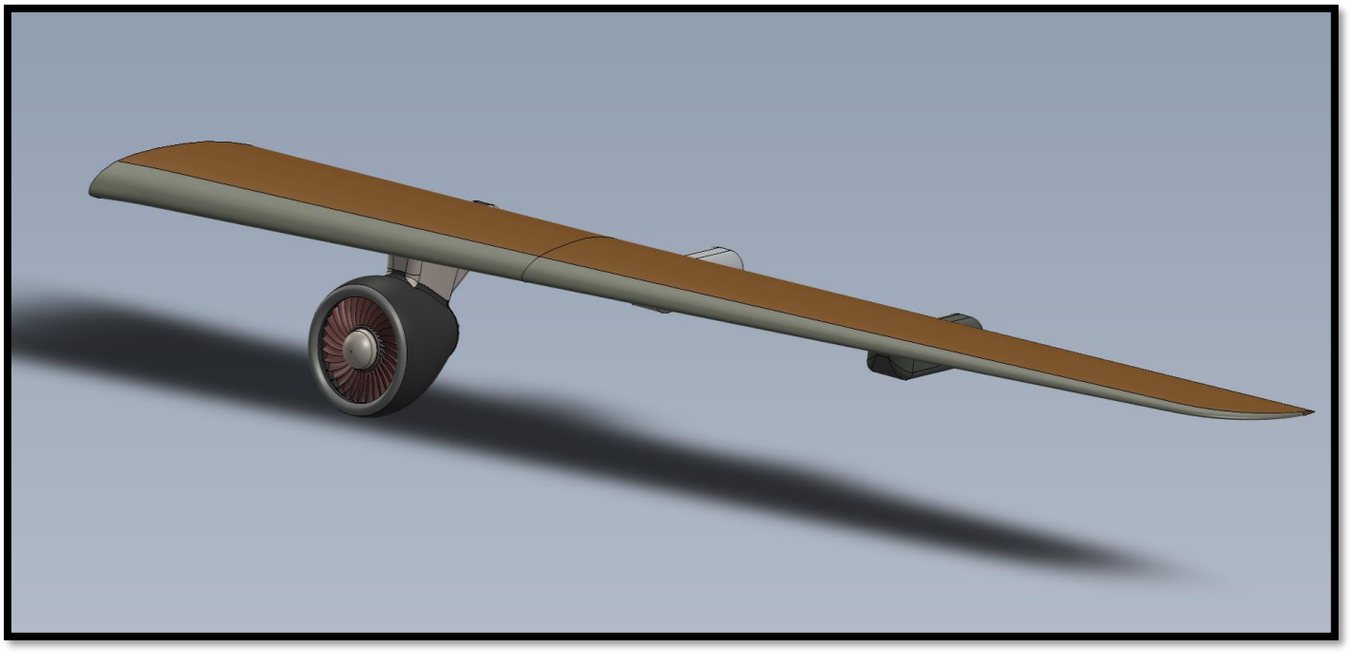


Project 3: Designing of 4-cylinder engine



The design is a complex assembly of crankshaft, cylinders, and piston heads

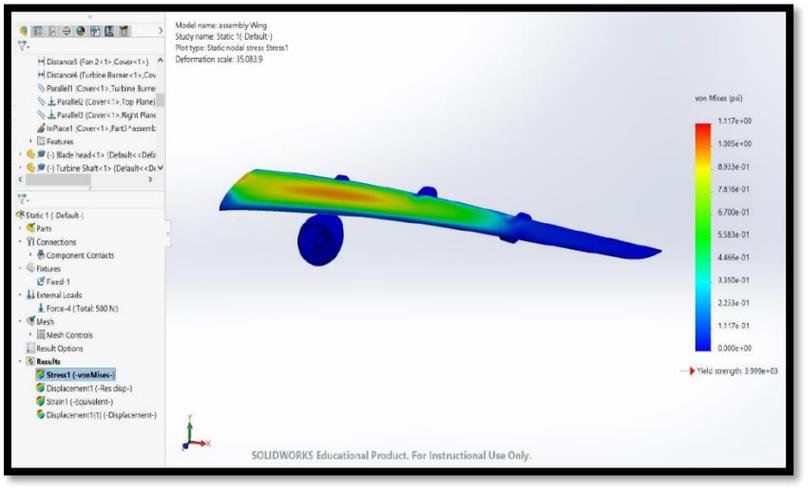
Project 4: Design Analysis on wing of Boeing aircraft



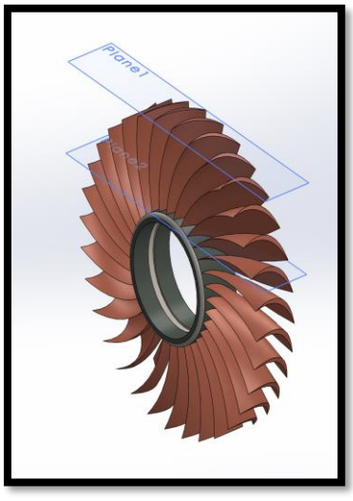
The design is a complex assembly of the wing of an aircraft which has high aerodynamics and constraint tolerance limits for high efficiency.

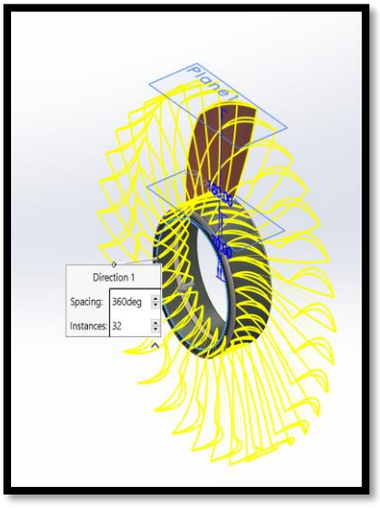
FEA result:

Stress:

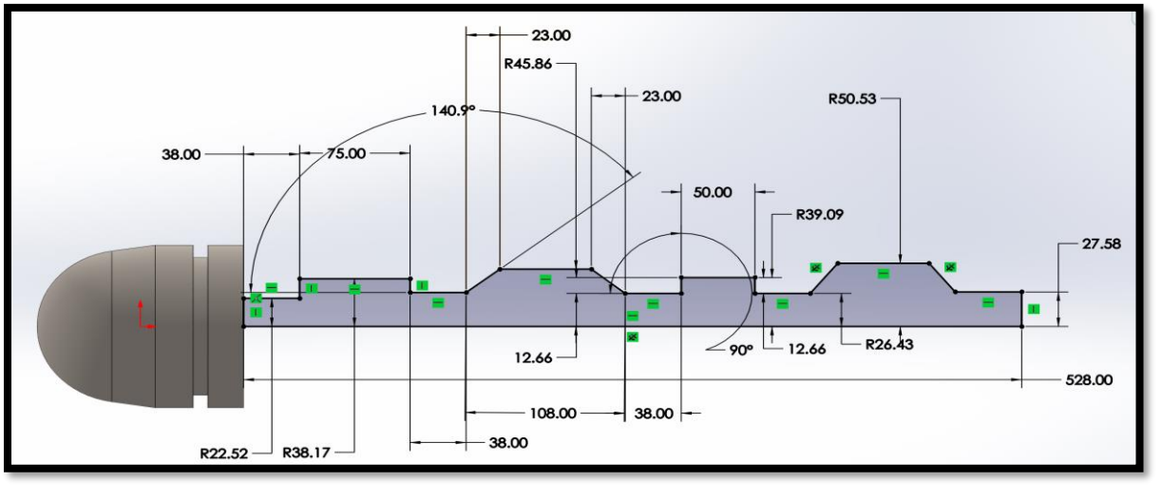


Wing blade design made using circular pattern feature giving us a very intricate design





Below is the propeller shaft designed using round function for easy design purpose.



Below is the method used in design the wing of the aircraft

Step 1: The shape is made using the multiple curves joining together so create the below sketch in top plane for one half of the wing profile

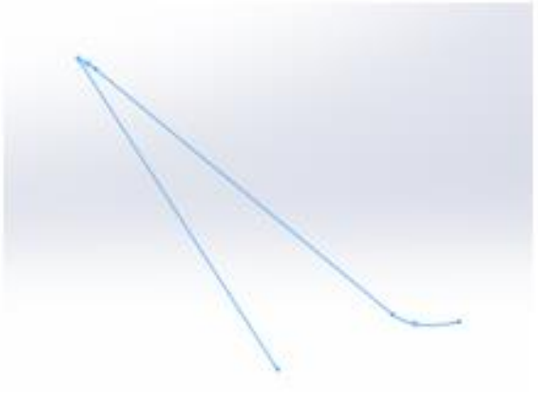


Fig 1

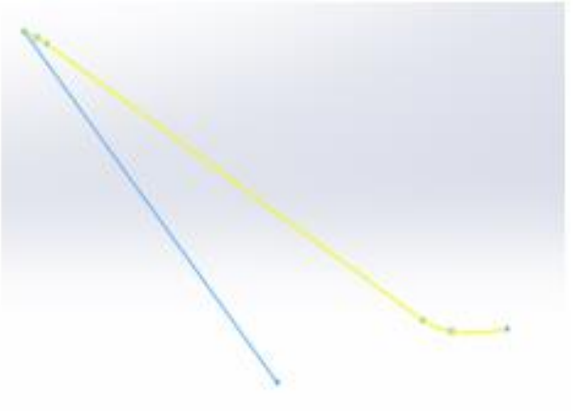
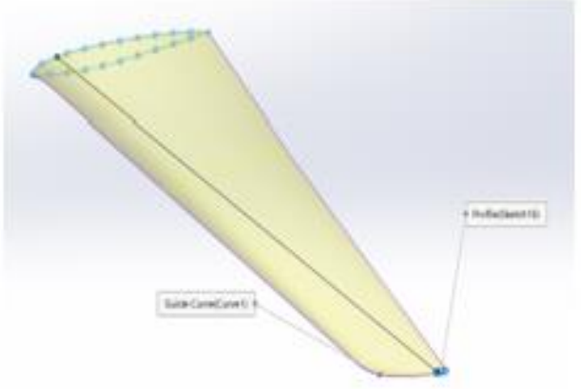
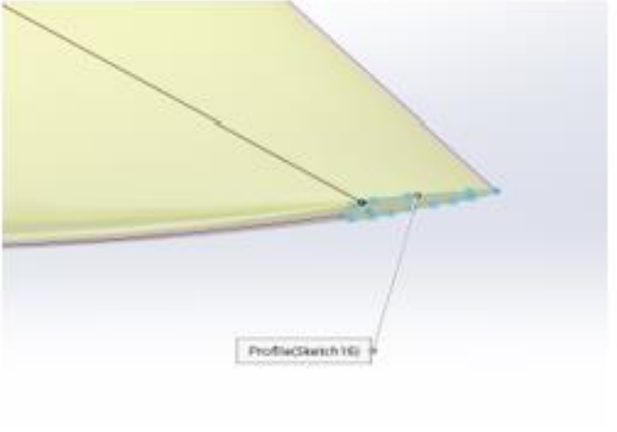


Fig 2

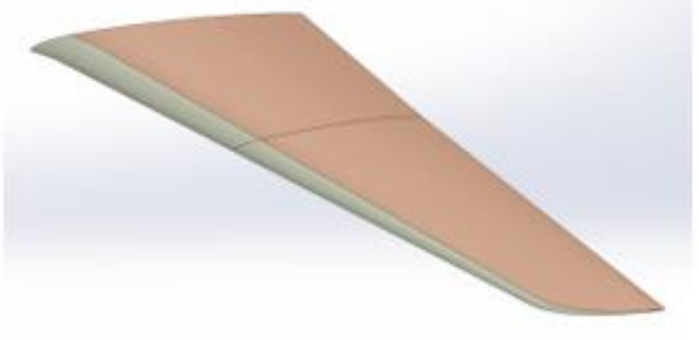
The figure 2 shows the projected curve combining the figure 1 curves for the profile of the wing

Step 2: Create the airfoil profile one end of the projected curve and the in the other end as shown below to get the span of the wing, then using loft feature and guide curve, create the wing.





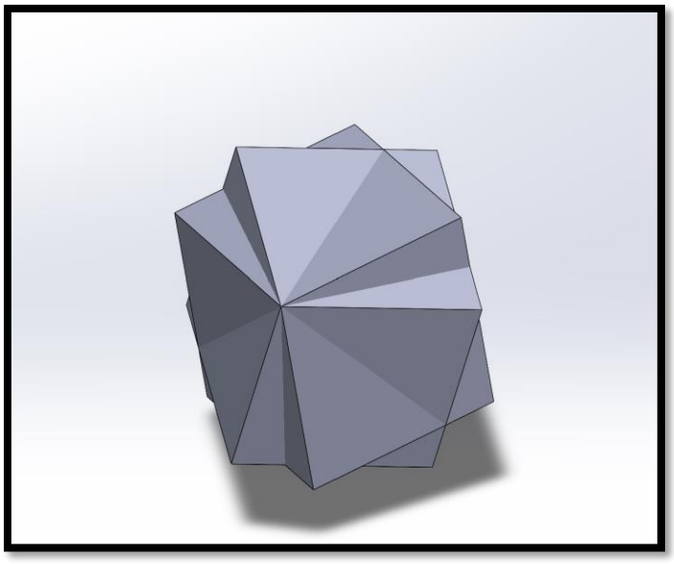
Step 3: Create the loft and choose the required material and appearance for the wing



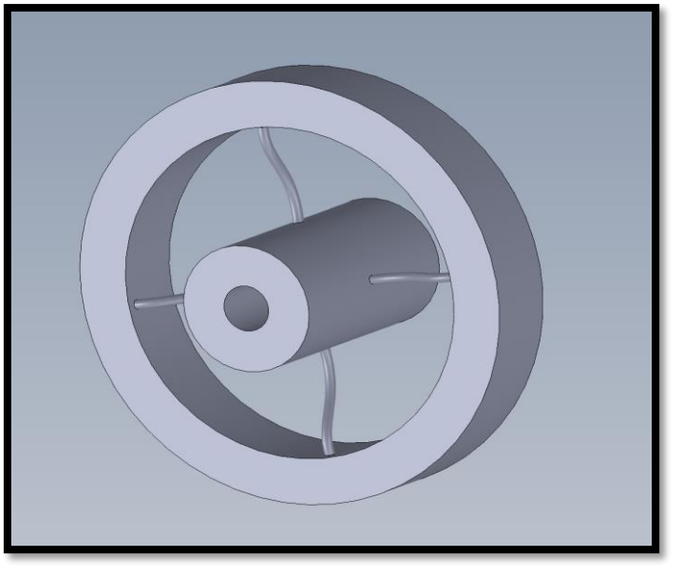
Project 5:

Designing of intricate design to show my skills in using all functions and parameters in CAD.

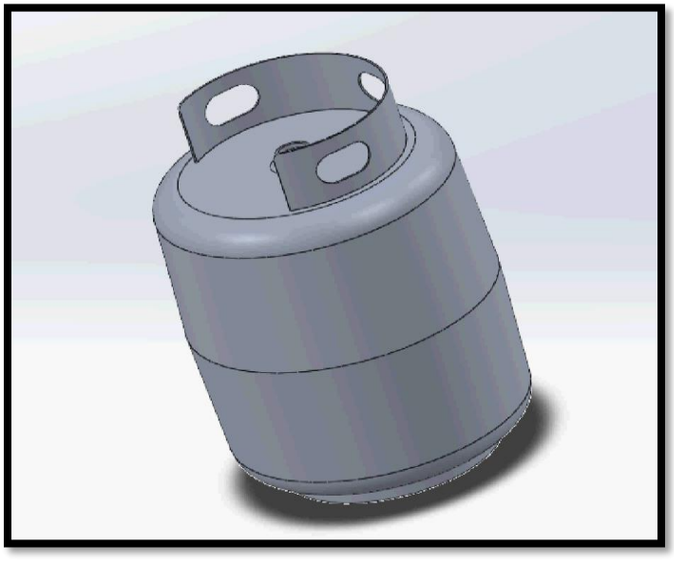
Part 1:



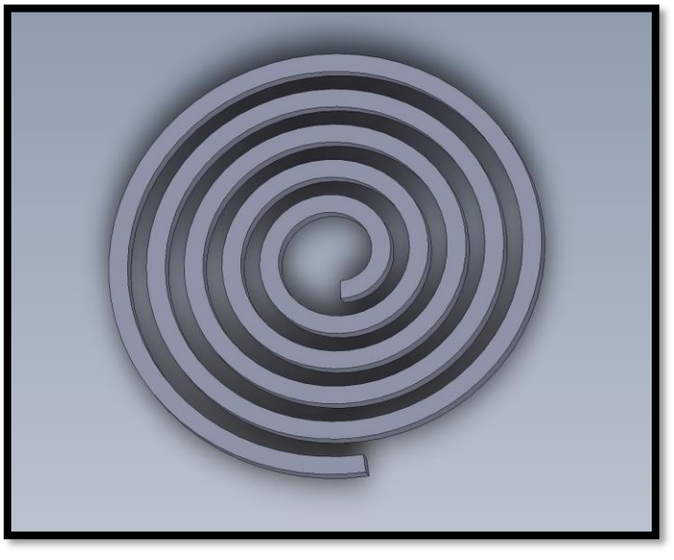
Part 2:



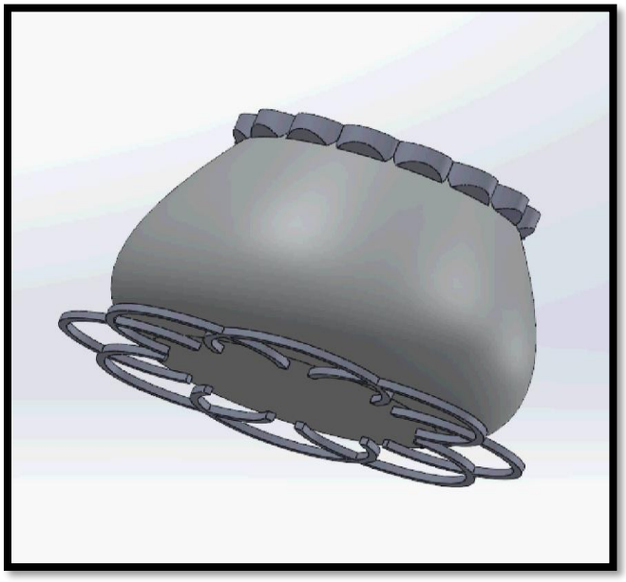
Part 3:



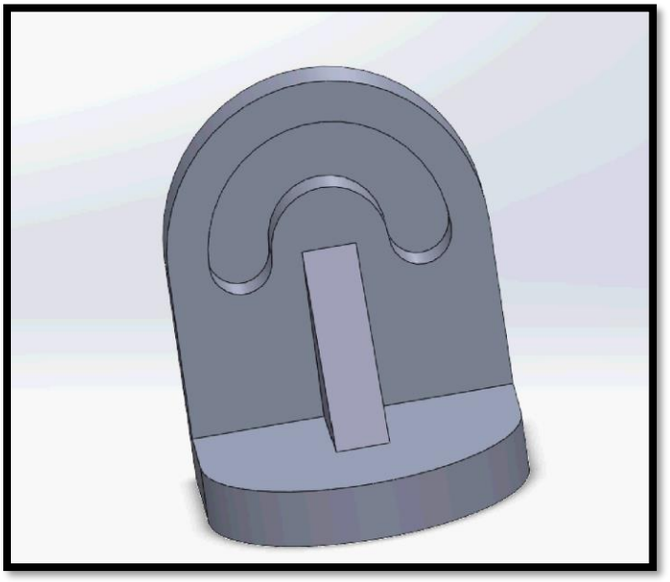
Part 4:



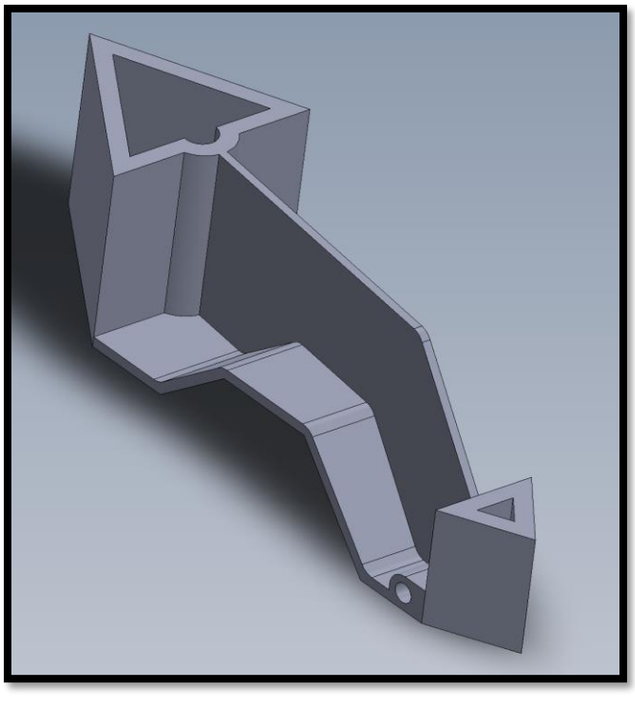
Part 5:

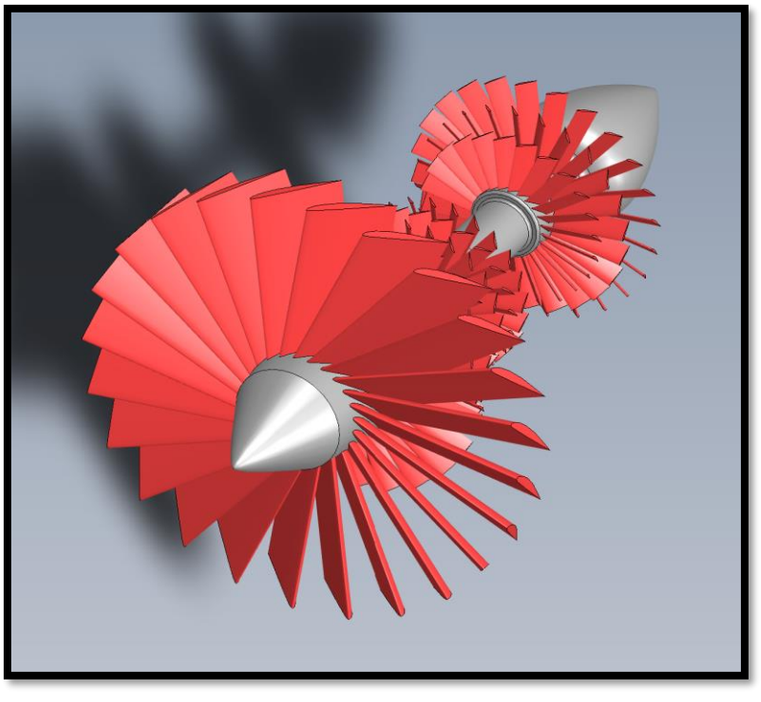


Part 6:

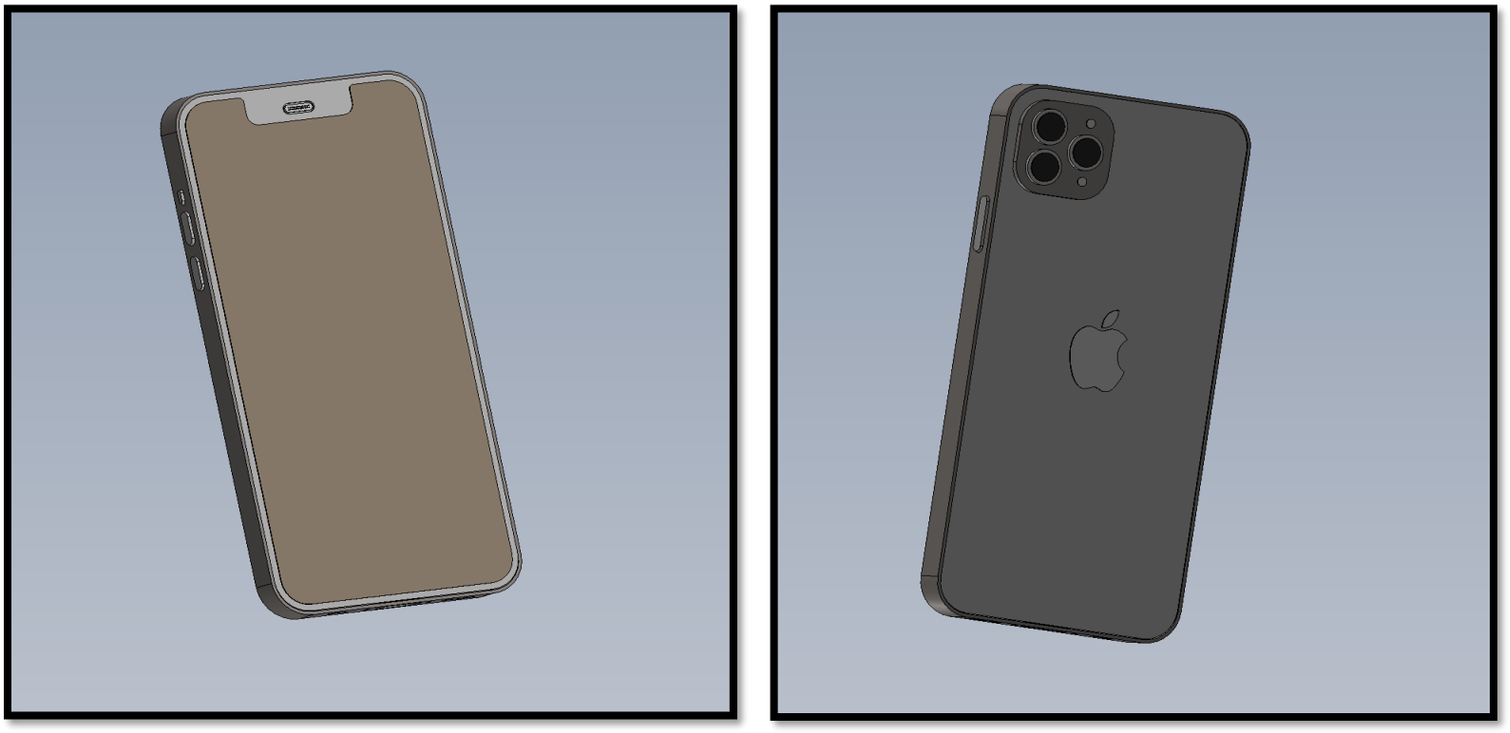


Part 7:





Project 6: Design durability, reliability and stress test on iPhone 12



FEA result