

Daniel Moodie, Cecilia Schoener, and Cristina Cervantes
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Background

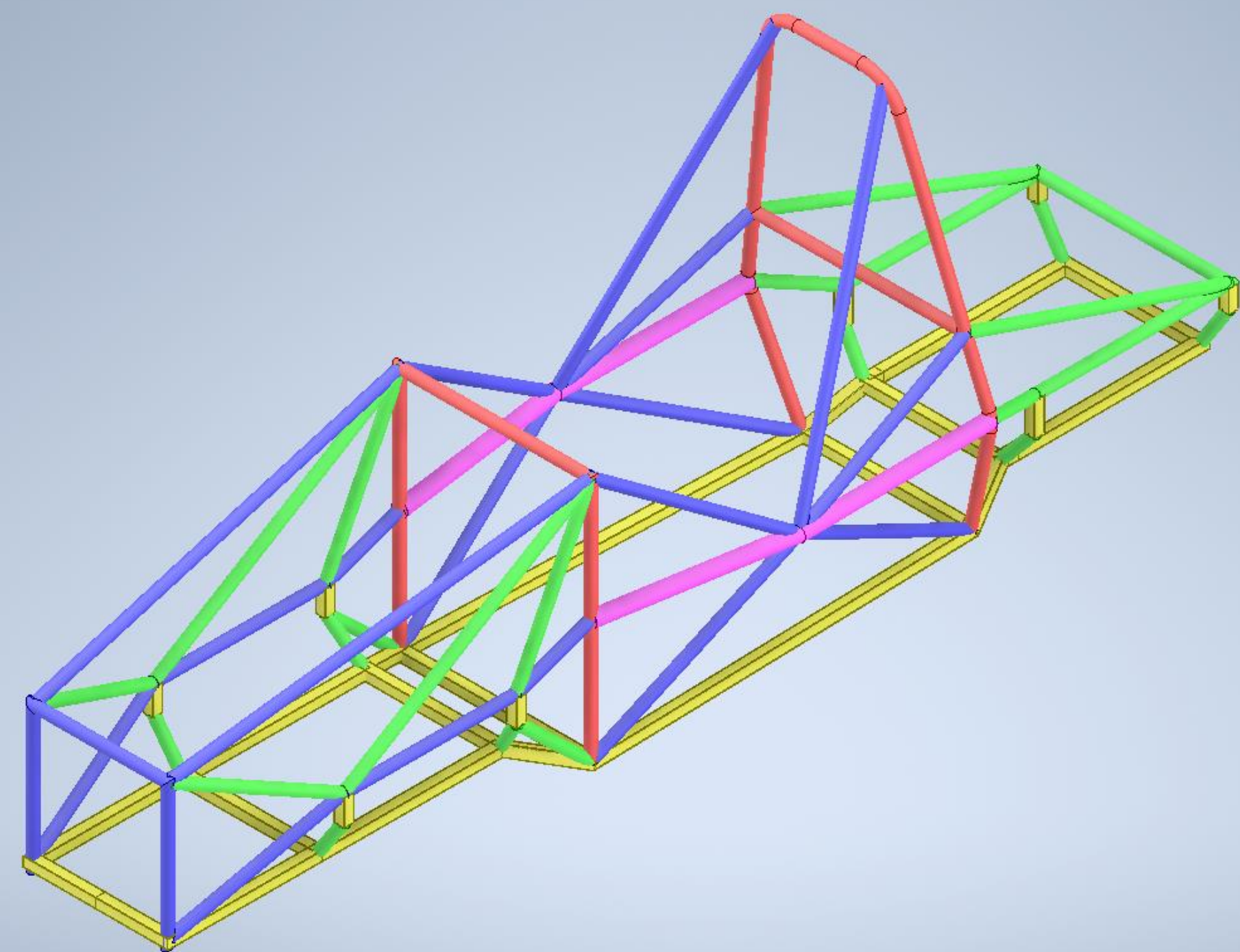
Formula SAE (FSAE) is an international collegiate engineering design competition that challenges universities to design, manufacture, and race formula cars.

Goal

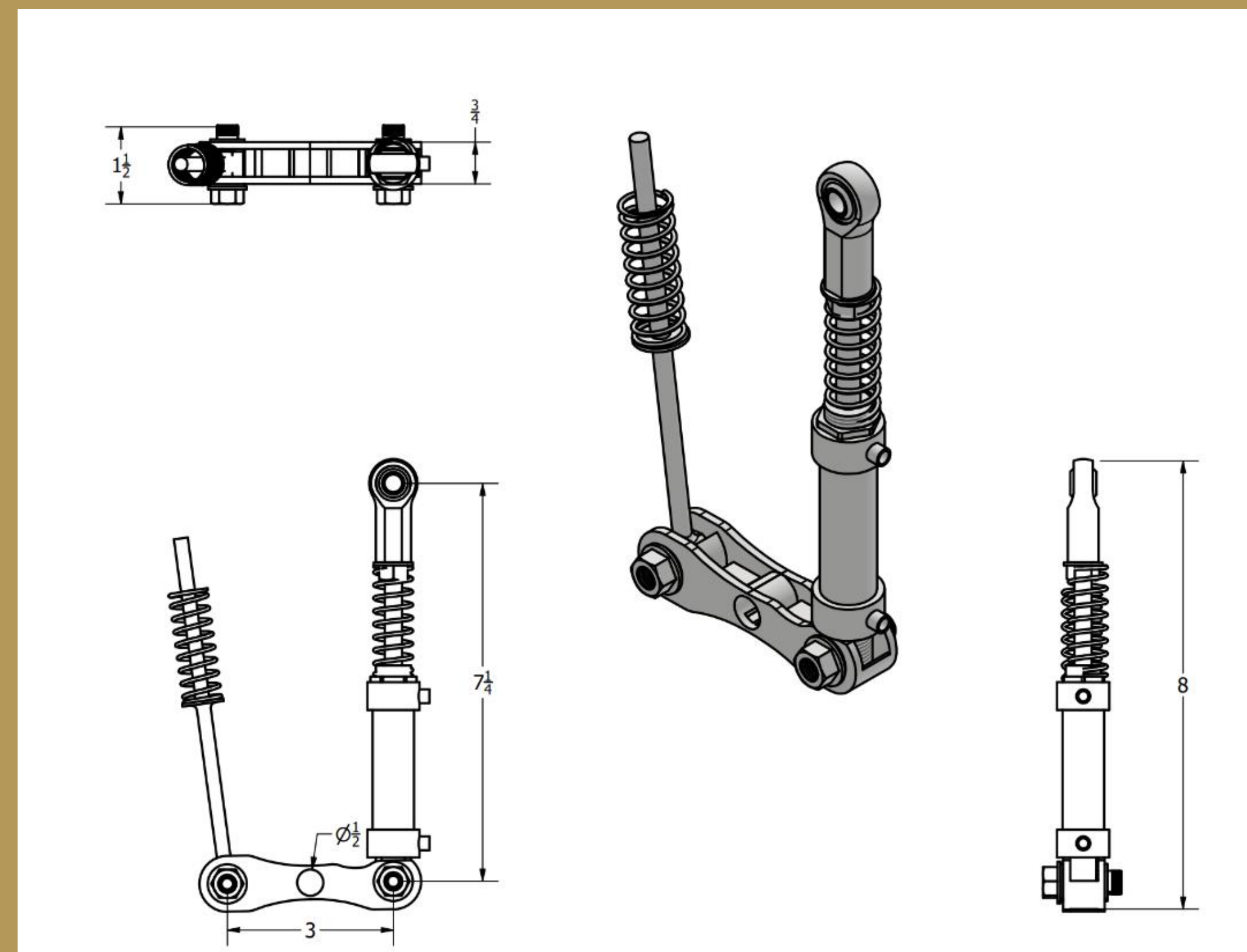
- Design, manufacture, and assemble a shifter assembly that complies with the FSAE 2023 rules
- It should pass technical inspection and operate effectively in the dynamic events during the 2023 FSAE competition

Objectives

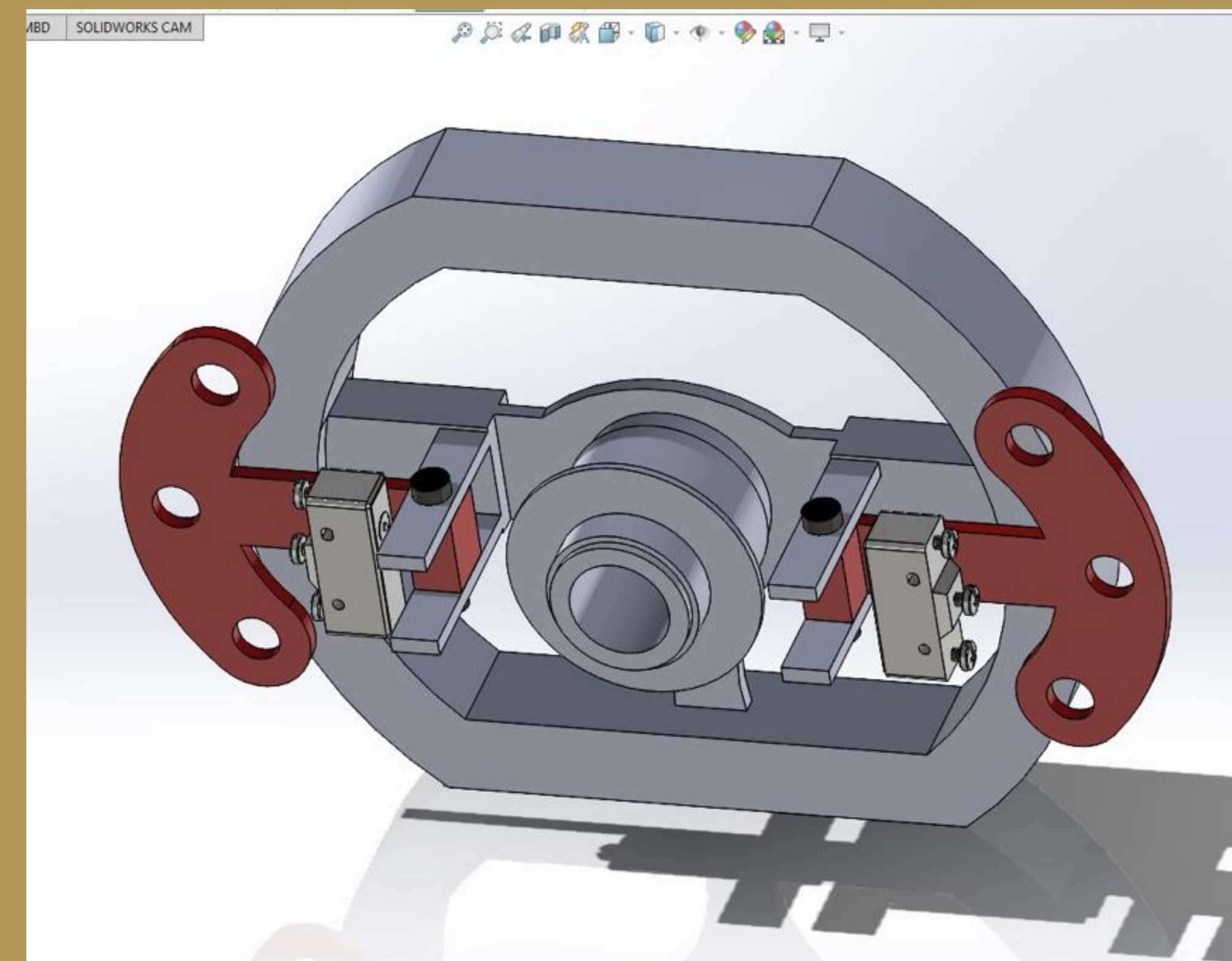
- High strength to weight ratio
- Optimized factor of safety
 - High reliability



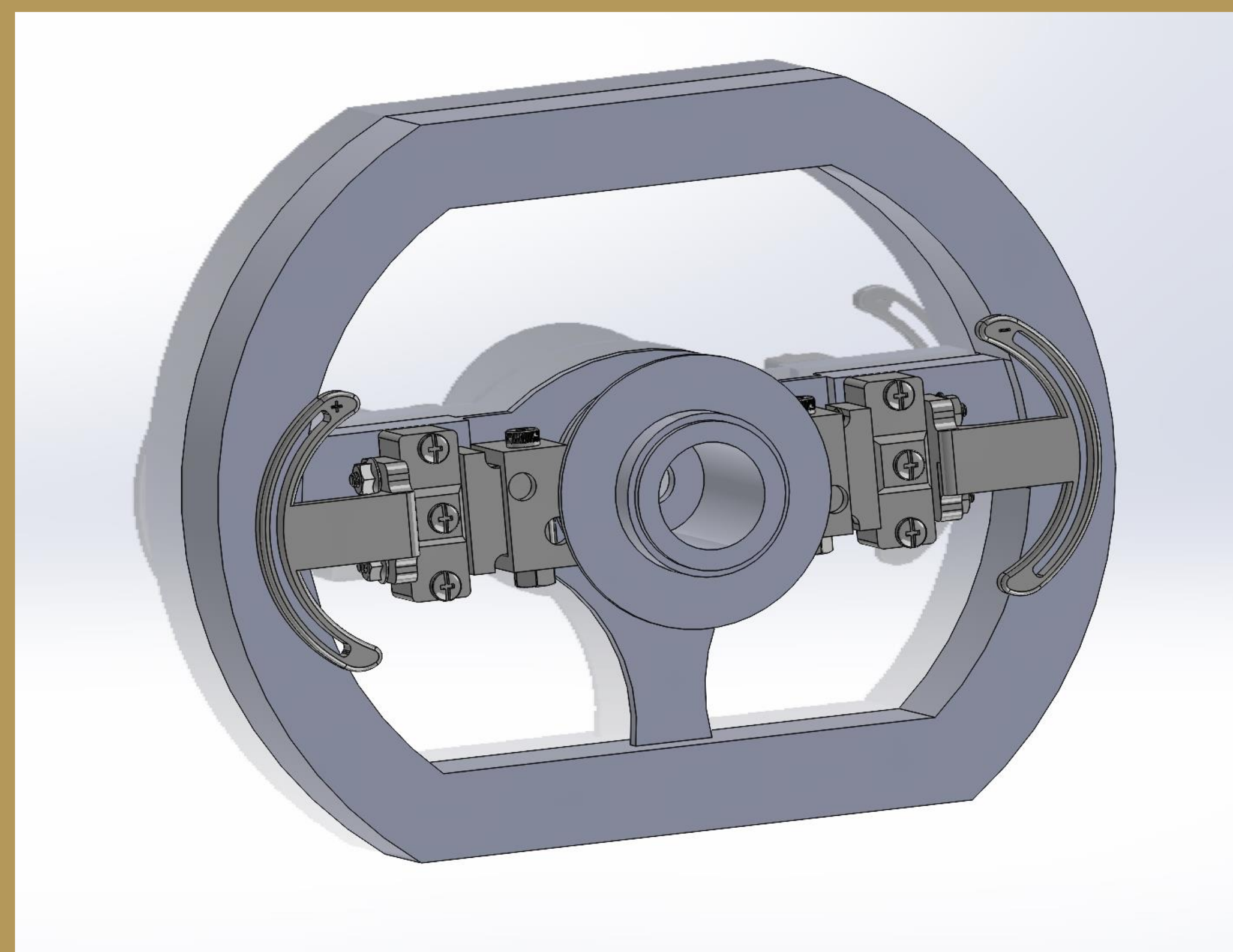
CAD



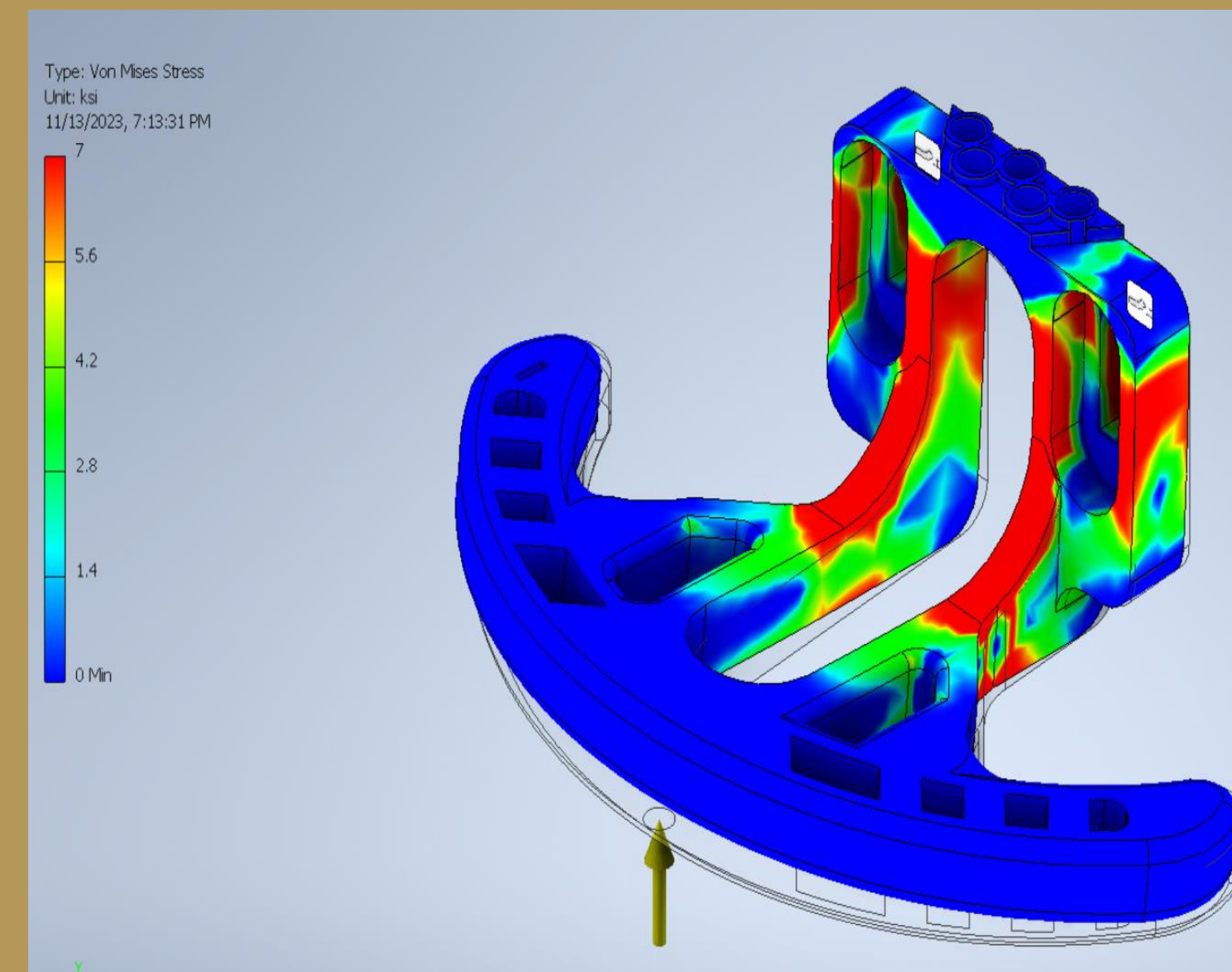
Original Lower Shifter Model



Original Paddle Shifter Model



New Paddle Shifter Model



FEA for Shifter

Next Steps

- Clutch actuation
- Auto-blipper
- Transmission tuning
- Final assembly

Acknowledgements

Abhimanyu Sharotry – Project Advisor
 Thomas Fenn – Electrical Support
 James Davidson – Course instructor
 Lost Paintball: Mike Hall - Pneumatic Sponsor

Team



Cecilia Schoener (Left), Cristina Cervantes (Center), and Daniel Moodie (Right)

Flowchart

