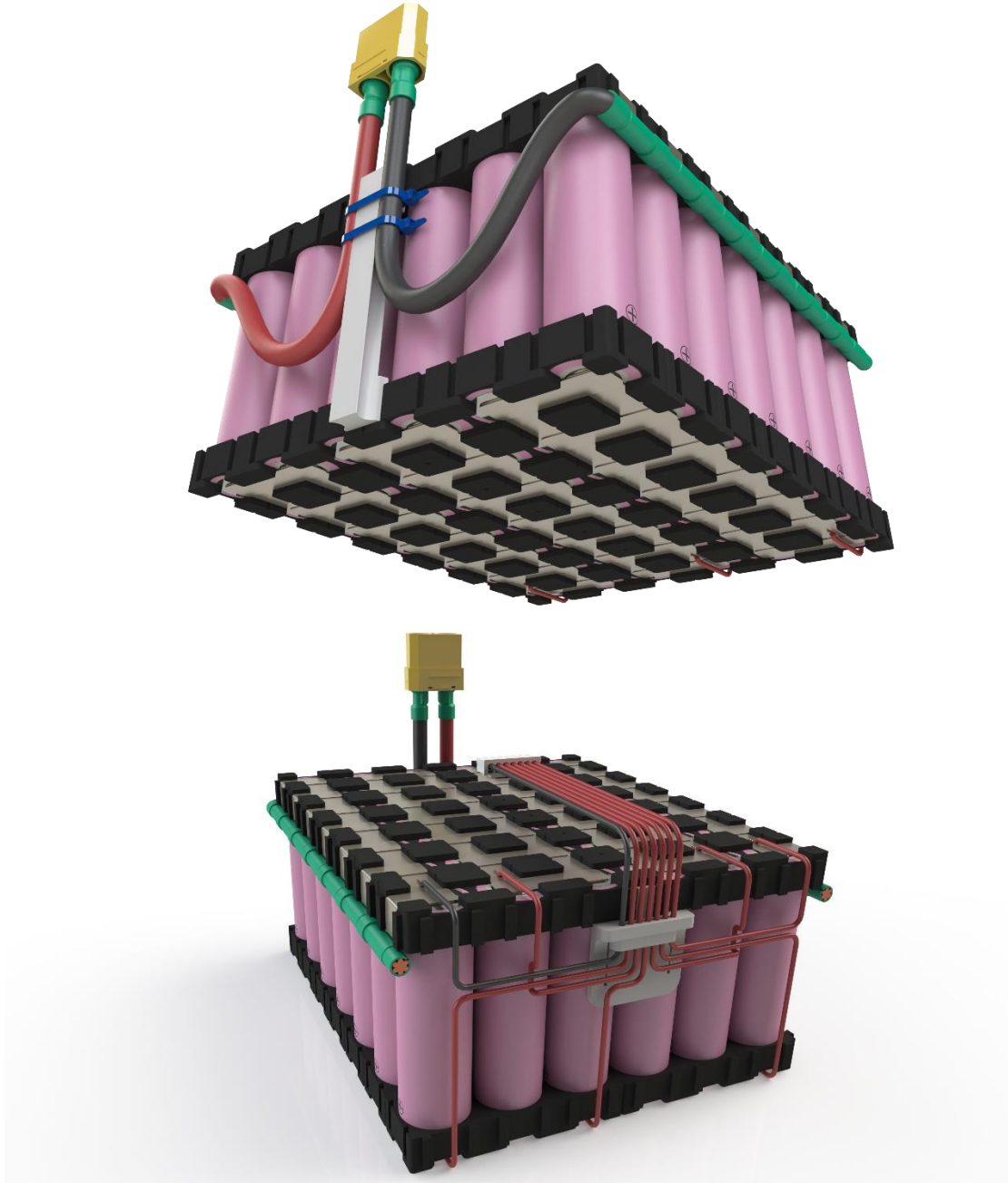
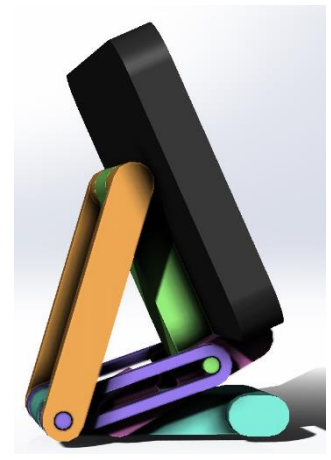
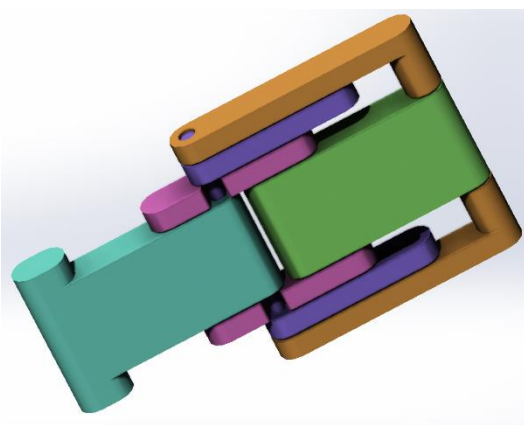
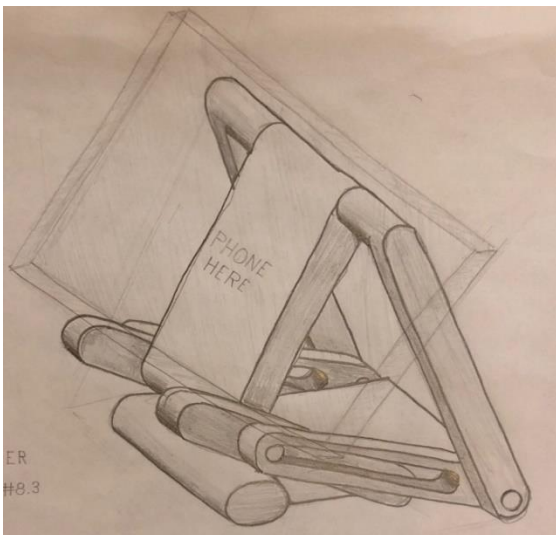
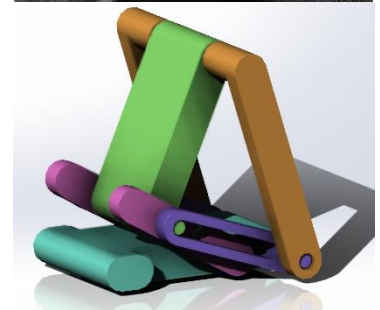
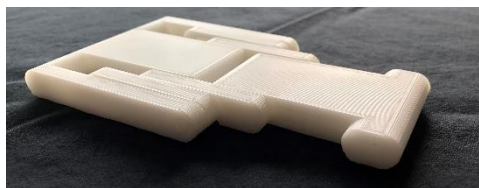
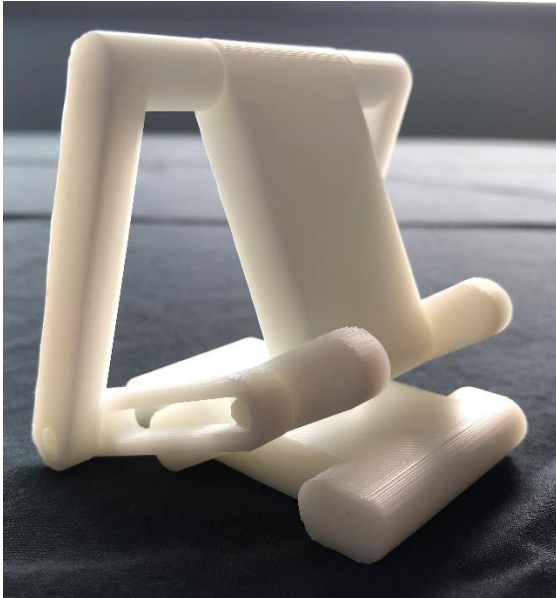


6s7p, 18650 Li-Ion Battery Pack – UW Rover Team



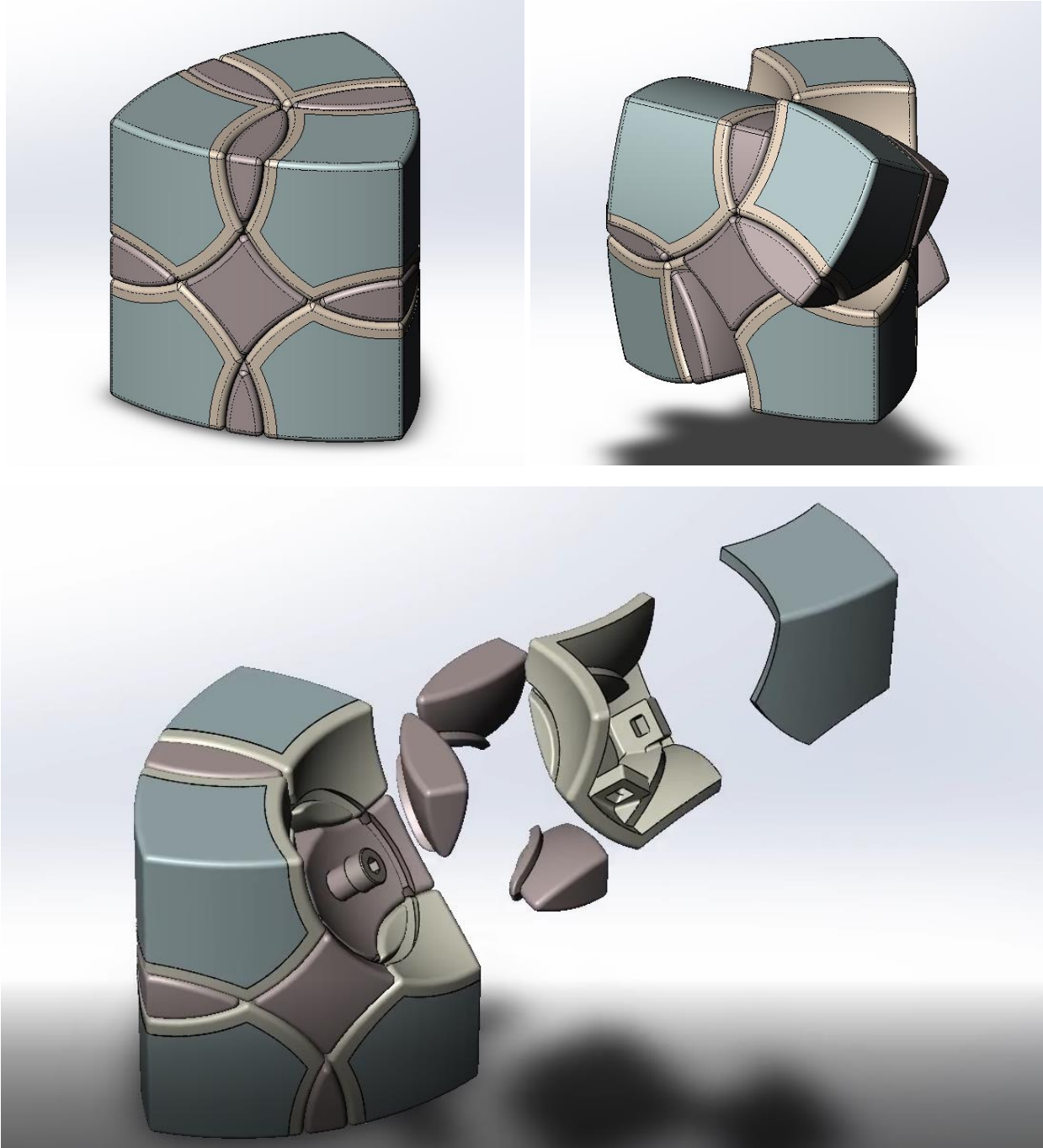
- Capable of supplying 100 A peak current @ 24 V to power a mars rover for 45 minutes minimum
- Utilizes Samsung 30Q 18650 cells for high current draw and good capacity specs
- Compact 3D printable strain relief mechanisms to maintain small footprint

Folding Phone Stand



- 3D printed phone stand, made of ABS filament.
- Prints in one piece with no assembly required
- 5 separate interlocking pieces makes it impossible to fall apart
- Linkage lengths were computed for and selected based on aesthetic appeal
- Fully parameterised CAD models allow for easy iteration of link lengths

Twisty Puzzle (in progress)



- 3D printed Twisty puzzle (Rubik's cube family) Similar to bubbloid design
- Unique design of 6 twisting corners and 9 interlocking edge pieces allows the puzzle to morph as it is scrambled

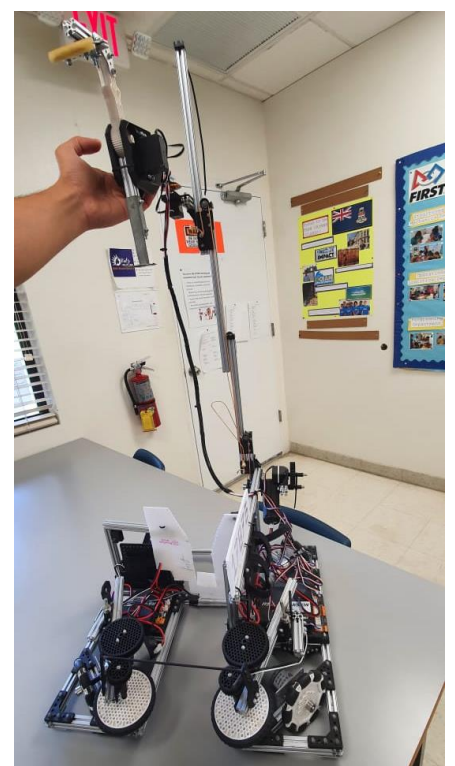
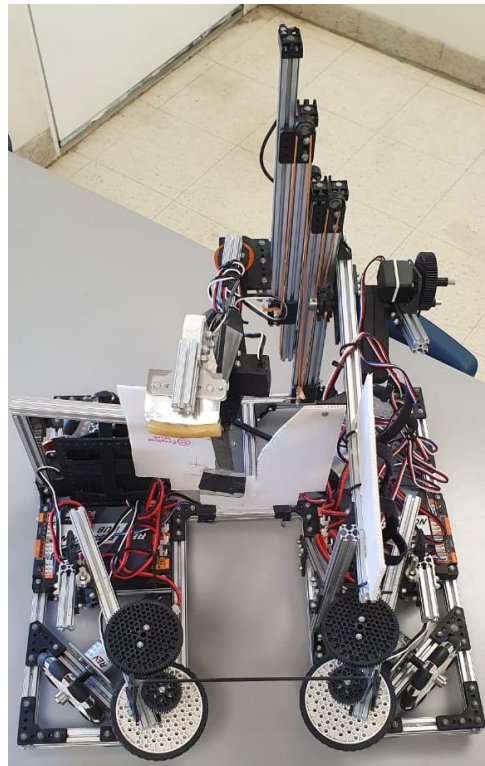
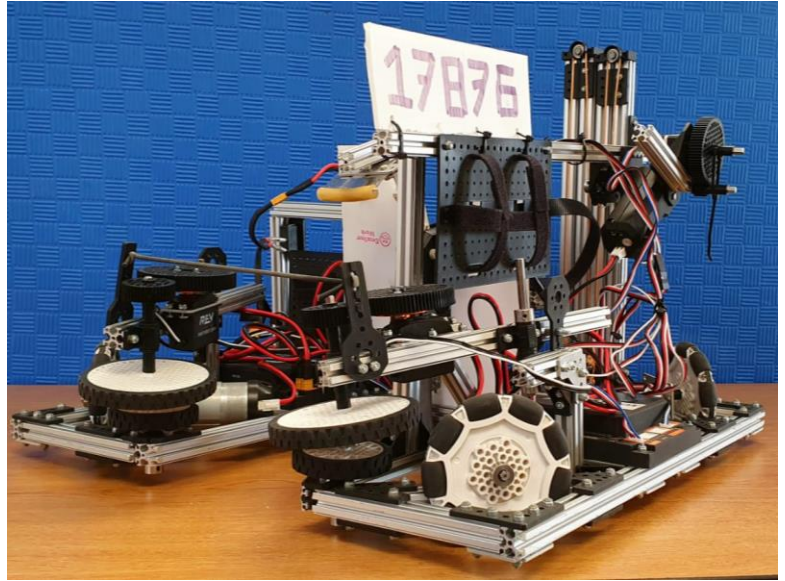
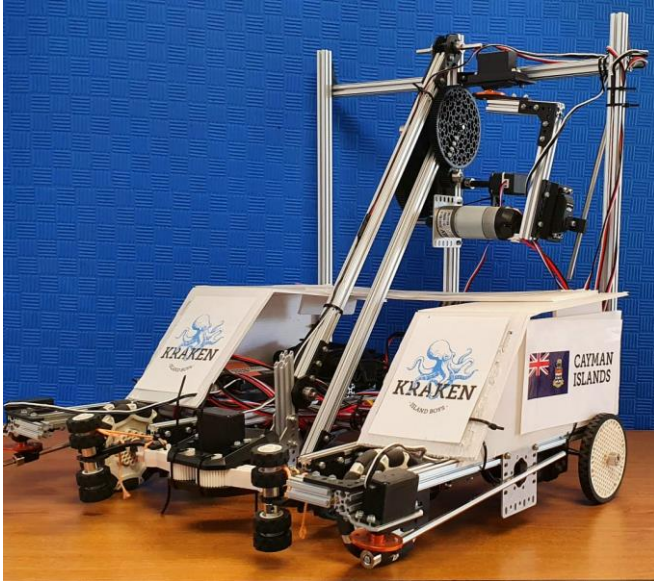
Ethan Cronier

ethan_cronier@outlook.com

226-989-0768

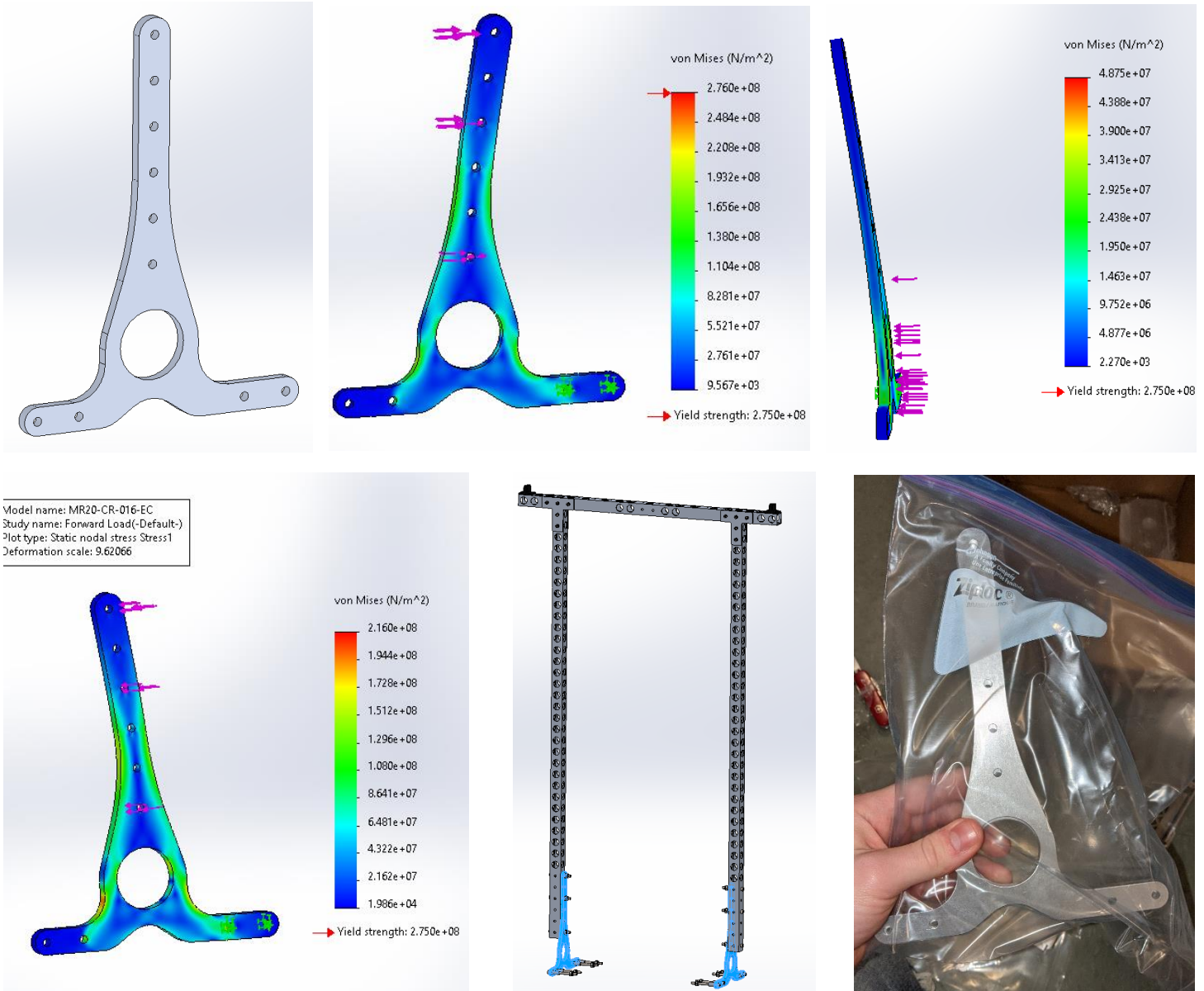
University of Waterloo - BASc in Mechatronics Engineering

FIRST: Cayman Islands FGC 2018 & FRC 17876



- Represented the Cayman Islands in the international FIRST global challenge FGC (2018) placed 101st
- Lead the mechanical and software design of 3 FTC teams over 2 years
- Won the Inspire award at the national competition both years (2019, 2020)
- Placed 2nd place overall at the national competition both years (2019, 2020)

FEA Bracket – UW Rover Team



- Optimised communications bracket on rover to reduce weight of existing part
- Used Solidworks FEA to remove as much unnecessary material as possible whilst remaining within load requirements
- Designed for 6061-T6 Aluminum and fabricated with laser cutting

Base-Station – UW Rover Team



- Redesigned base-station to support higher loads
- Sourced and tested tripod (205 lbs test load)
- Redesigned quick mount solution for quicker assembly/disassembly of the base station