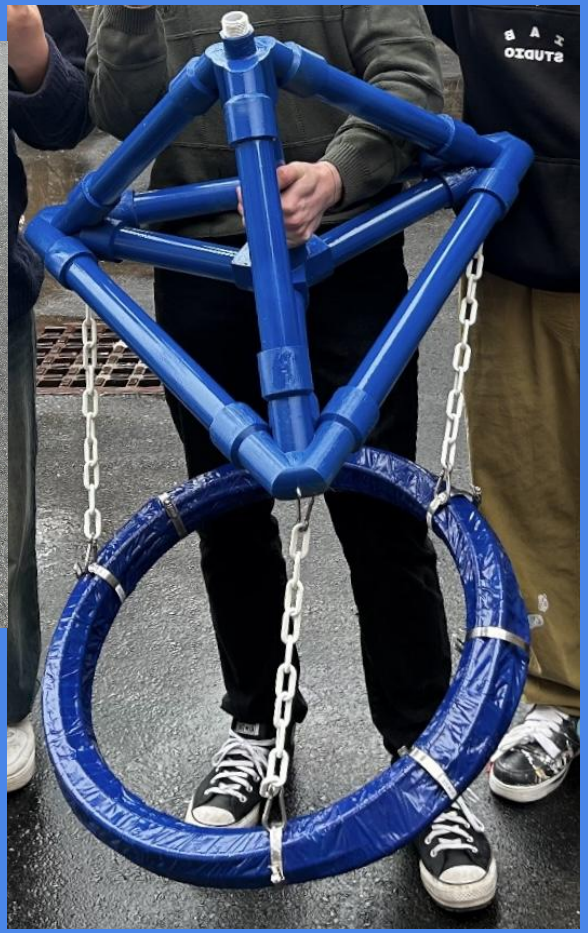
Turbine Platform Model







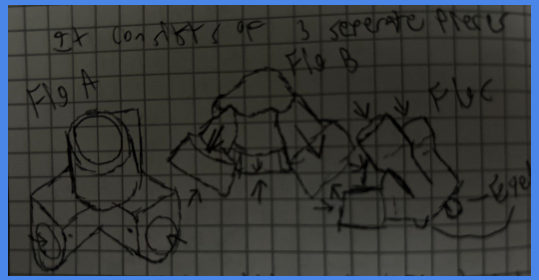
Turbine Platform Model

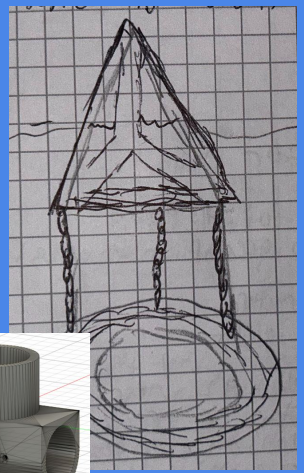
Problem:

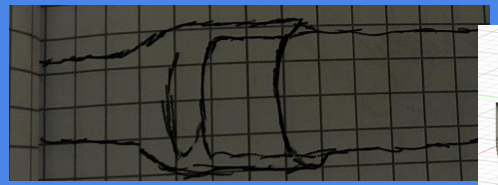
I led a team to compete in an engineering challenge at the University of Maine. We were required to make a model of a floating wind turbine platform for cheap, that could perform well under stress.

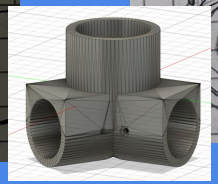
Design:

We decided to take inspiration from the company Stiesdal, and their TetraSpar model- instead of a triangular keel changing to a circular keel. The model top is made of PVC pipes and 3D Printed Joints. The keel is made of heavily modified hula hoops, using sand as ballast. The hoops are sealed together, and held by hose clamps, chain, and carabiners to the top.









Build Process:

I headed the build process. I slitted and filled hula hoops, hose clamped and sealed them for the keel. Assembling the top was hard because of the angle of the joints. I ended up tapping the piece in with a hammer, cracking one. After gluing it I bored out the top for the attachment piece to the turbine. The finishing touch was a coat of blue spray paint







Results/Retrospective:

We didn't place very highly in the competition at UMaine. In terms of durability our turbine model was fairly solid, in stability it stood up alright. We made it mostly to explore the merits of the TetraSpar's industrialized design.