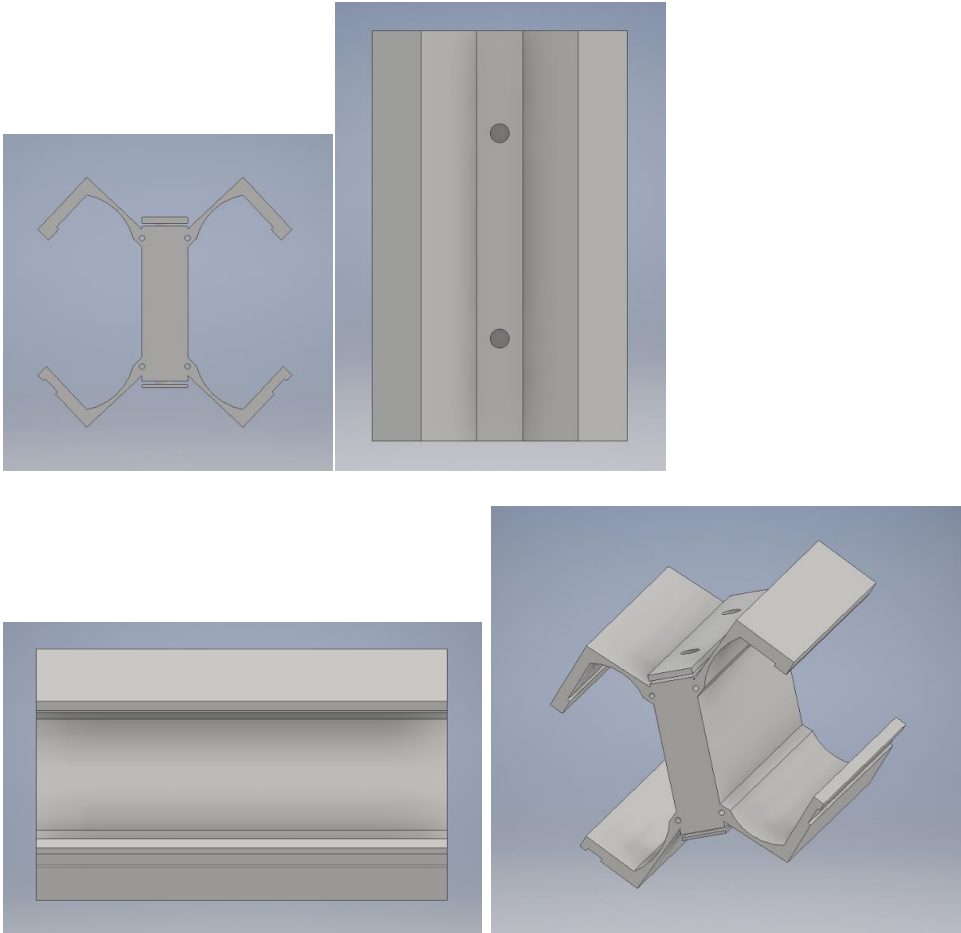


The part created is a battery clip that keeps the battery to a robot in place. The clip can also hold a spare battery to make the exchange of batteries faster. During some matches, our team would see our battery fall on the field after not being properly put into place. During one match, the battery was dragging and unplugged from the brain, causing our robot to be frozen in place for the rest of the match. With this part, these problems can be avoided. The part simply attaches to any piece of metal that it can attach to. It is size efficient, it is approximately the size of ~5" x 1 7/8" x 1" and can fit anywhere due to some of its features. The top and bottom bars have holes for screws to be placed. The part would go inside the robot by the brain. The top and bottom bars both have spinning capability, meaning they can be adjusted to any angle to fit. Plus, no motors are needed for this part to work.

In Autodesk Inventor, I used the wide variety of tools to achieve my design. I used mostly lines and arcs to create the part you see here. The most complex part of this was creating the coils of where the screws could go. When I first started, I created a simple corner of the shape with just one arc and a part of the rectangle. I then simply mirrored the image to get perfect dimensions and create the part faster. Later I added details, such as the screw holes and clips to hold the battery in place. All of this went by much faster to the skills I learned from watching the Autodesk tutorials provided. They provided answers to questions and helped me work faster.

From this project, I learned many skills working with Inventor. I learned tricks and hotkeys to make my work faster in the future. Not only did I learn about Inventor, I learned about the values of working as a team. I plan to use this skills I learned in the future when working in a job or in class designing a part. Inventor also helps out our team. In Inventor, we are able to see a visual 3D model of our robot and be able to find out angles we would need to cut. Although,

Inventor does not pertain to my future career, I feel it is a necessary skill all engineers should learn.



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