I created the license plate holder because of the amount of time that I saw being wasted between matches at a tournament. Many times, teams would be late to a match due to the fact that they had the wrong plates and they had to change them out. With using license plates versus flags, they end up being much more durable, however much more time consuming as well. I made this part for a fast and easy solution to this problem.

The part would be mounted onto the robot in the location desirable for the license plates. Part one and two can be attached with any vex screws, and once attached to the robot and the license plate respectively, they slide on to each other. The idea is to have one on each license plate so that switching out the plates is quick and easy.

In Inventor, I downloaded a piece of wide aluminum C-Channel in order to make my measurements for the part. I drew out the total desired length and then extruded cuts the same size and distance as any VEX metal pattern. The mounting points were modeled after a pillow block bearing because that is what I used to prototype the model. For the second half, I just repeated the part, flipped it, and instead of using the extruded cut, I instead made an extrusion.

From this project, I learned how to utilize inventor for a real world application. Many times in school, the program is simply used for learning purposes but the Make It Real Challenge allowed me to apply what I learned. Real world use of the program is much more enjoyable as well. I will be using inventor in the future in order to make any small parts or pieces I may want or need. Inventor can help you on a competitive robotics team because it allows you to manufacture parts that you want, as unique as possible. 3D design software will help me in my career path as I plan to be an engineer myself.