

For this year's Make It Real CAD Challenge, I made a clip/slide-on VEX License plate. I made this part because between matches, one often needs to change out the license plate, from red to blue or vice versa. However, this often involved unscrewing a few things and took up valuable time that could be spent making repairs to the robot or finding out what was wrong with the robot. The new part would have the same functionality as the current VEX License plate, but this one could be clipped or slid on to a C-Channel, which would make changing out VEX License plates faster and easier. My first design of the part didn't work because I designed it in such a way that it was hard to see what was going on, so I made a new one. This new design of the part made the very back of the license plate, then the upper and lower parts of the clip, then the license plate itself. Then, I used the fillet tool to round off some of the corners and edges and added the text. To do this, I used Autodesk Inventor Professional 2019. From this project, I learned how important it is to thoroughly plan out what one's design process is and how time is extremely important. I plan on using 3D design software in the future for robotics, and later, for engineering work. 3D design software is useful for competitive robotics teams because it can be used to plan out how the robot will look before actually being built. It can also be used to stress test or as a tool to show judges the robot without the robot physically being there. 3D design software will help me in my career as I want to be an engineer. It can be used somewhat similarly as it is in robotics, in the sense that it can be used to plan out what something will look like and function without it being actually built.