

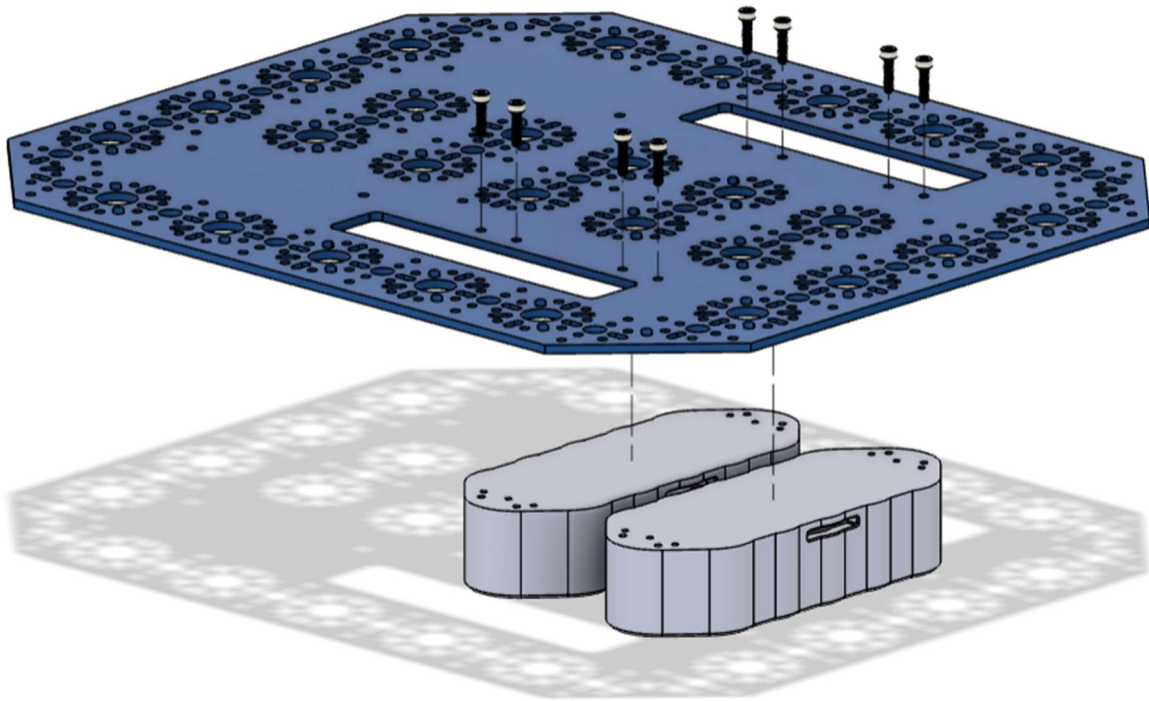


**The Mecanum Stack Robot Basic -
Autonomous Mobile Robotics Trainer**



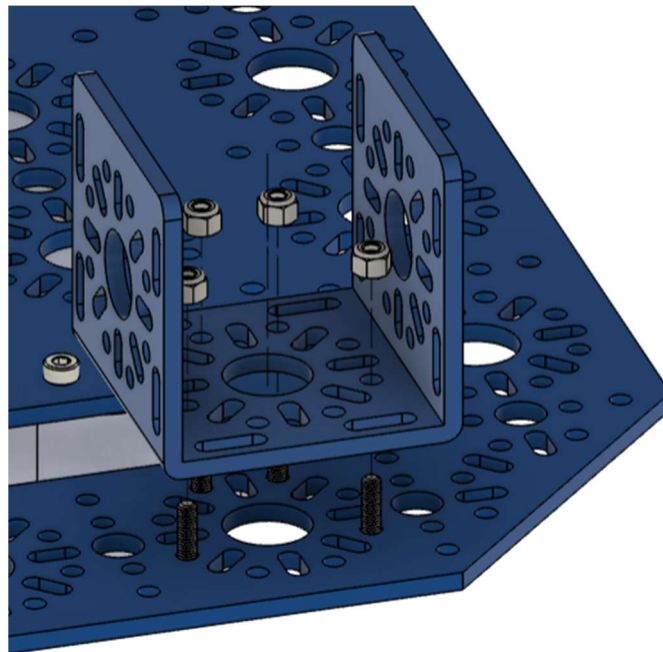
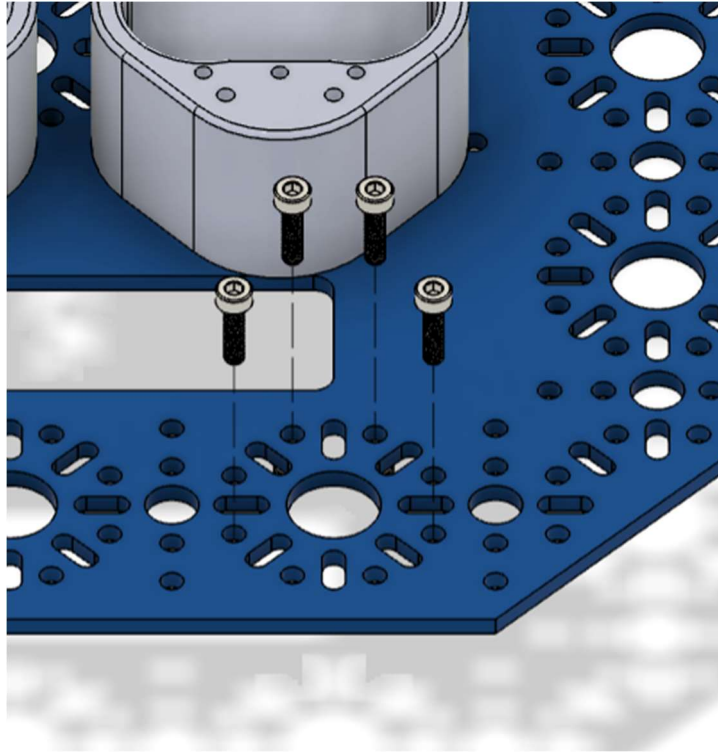
Step 1

Insert the blue velcro straps into the battery holders through the slot, one each. Using 8 M3 x 12mm screws, attach the battery holders to a base plate. Don't over tighten them as they thread into plastic.



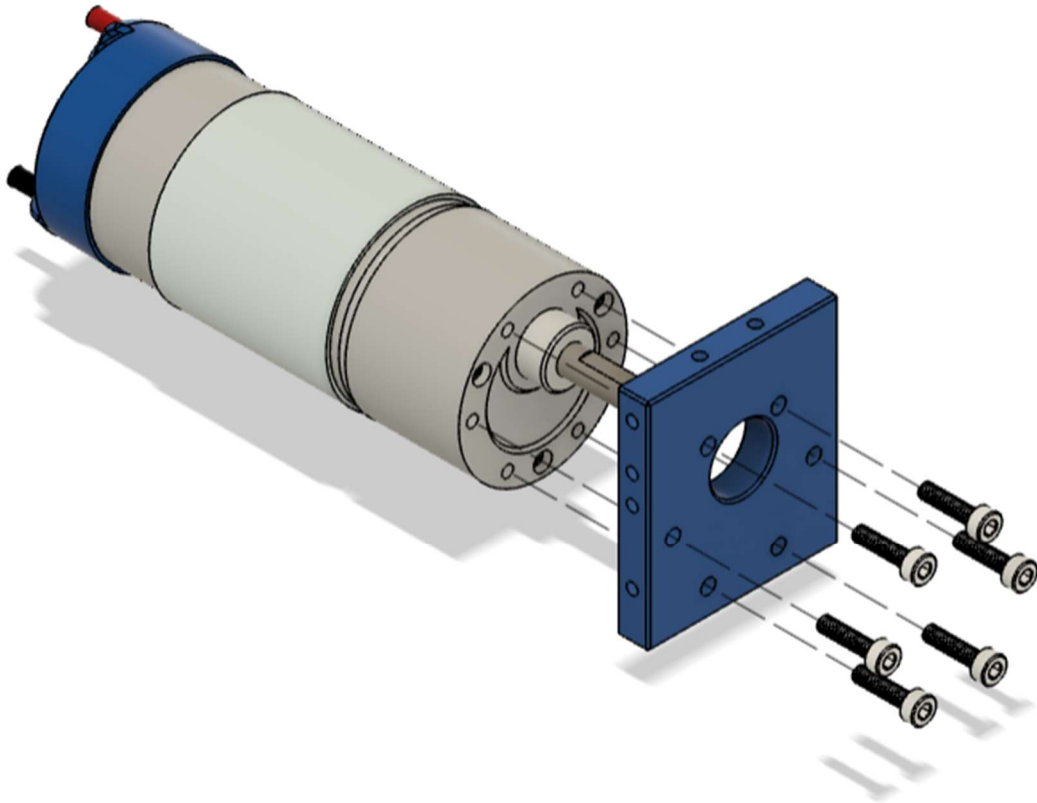
Step 2

Using 4 M3 x 12mm screws and M3 Nylock nuts, attach the 48mm U channel to the baseplate. Repeat this step for all sides.



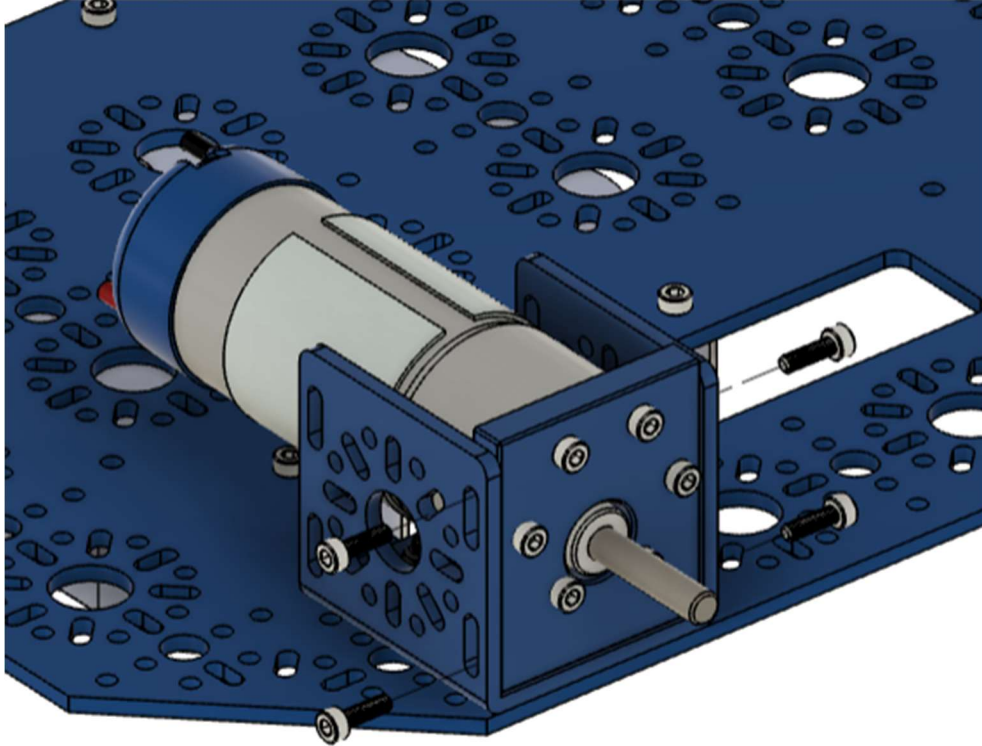
Step 3

Attach the Maverick Motor to the motor mount plate using 6 M3 x 12mm Screws.



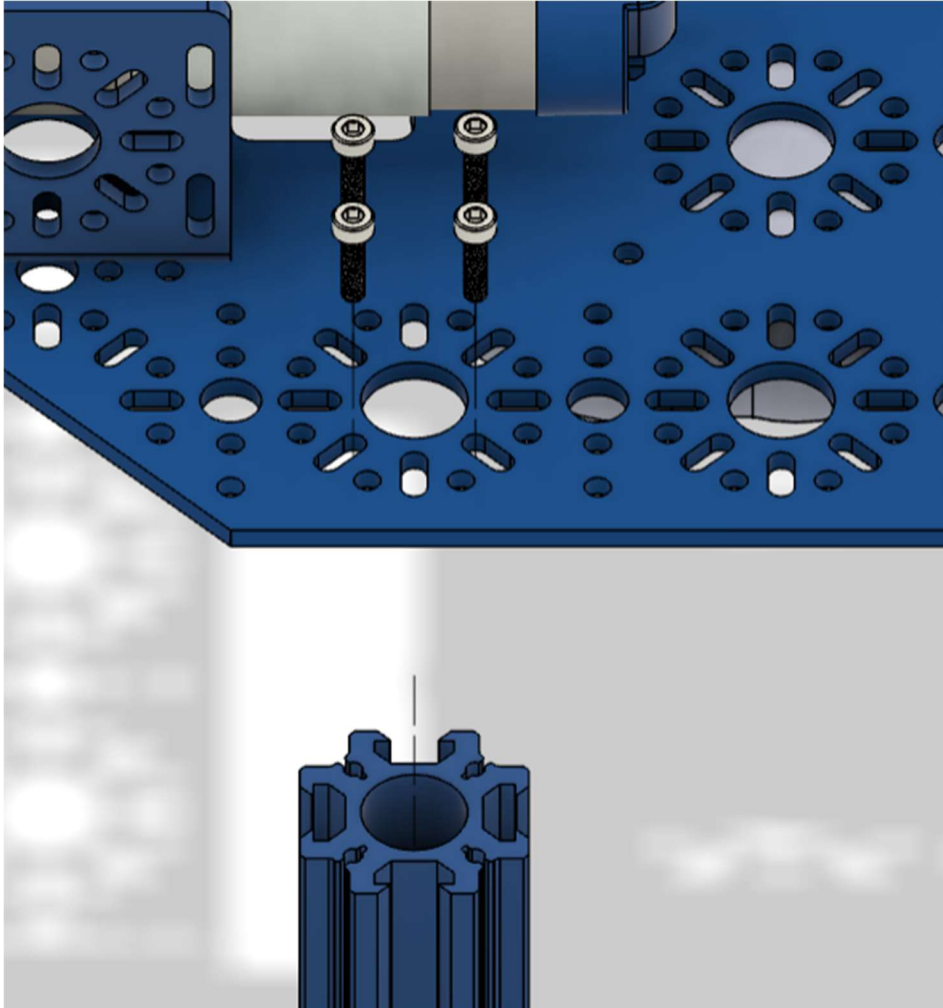
Step 4

Insert the motor and mount plate into the 48mm U channel flush with the front face and screw it together using 4 M3 x 10mm screws. Repeat for all motors.



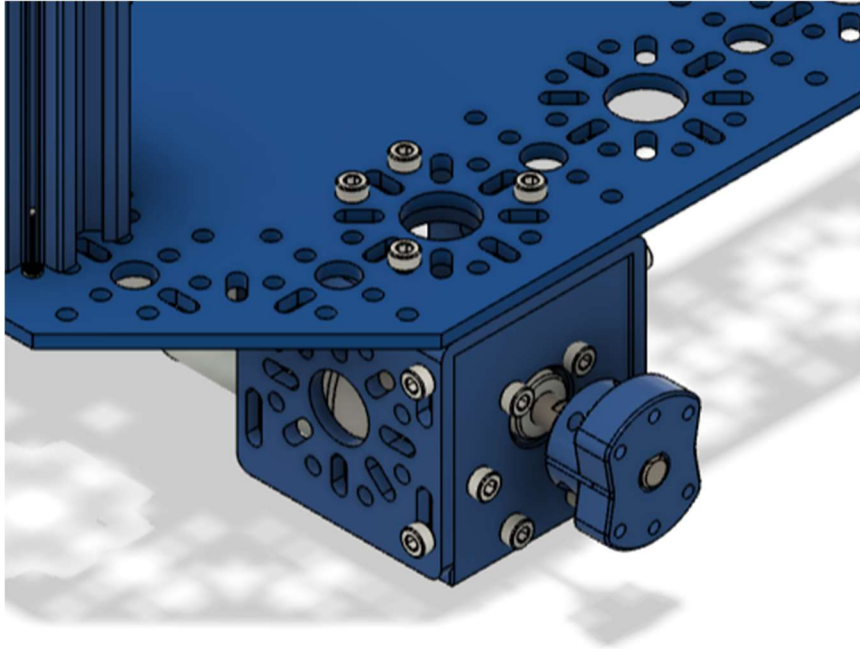
Step 5

Attach a 96mm T-slot extrusion to the baseplate using 4 M3 x 12mm screws. Repeat this step 4 times for the rest of the corners.



Step 6

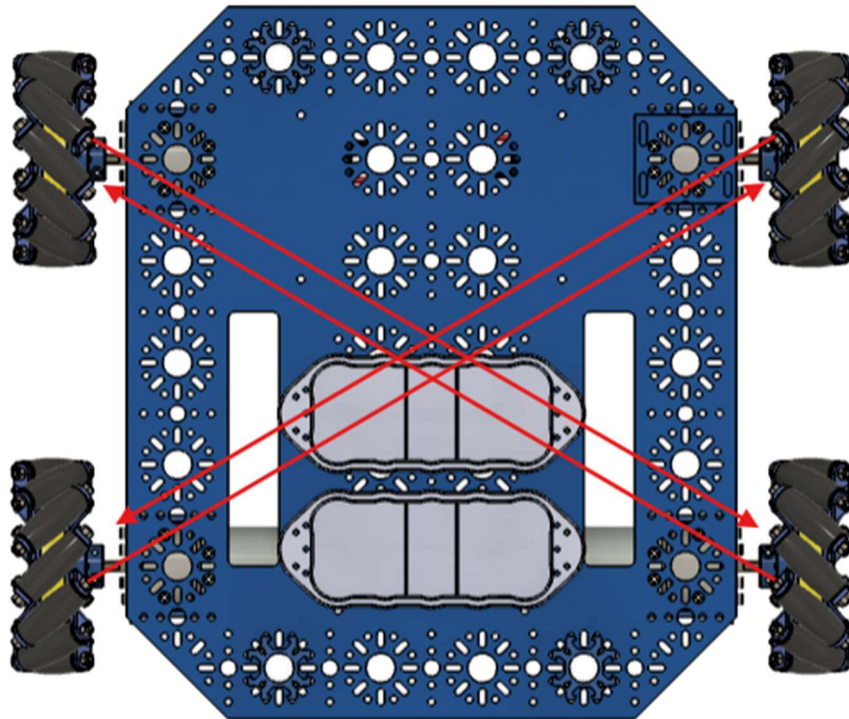
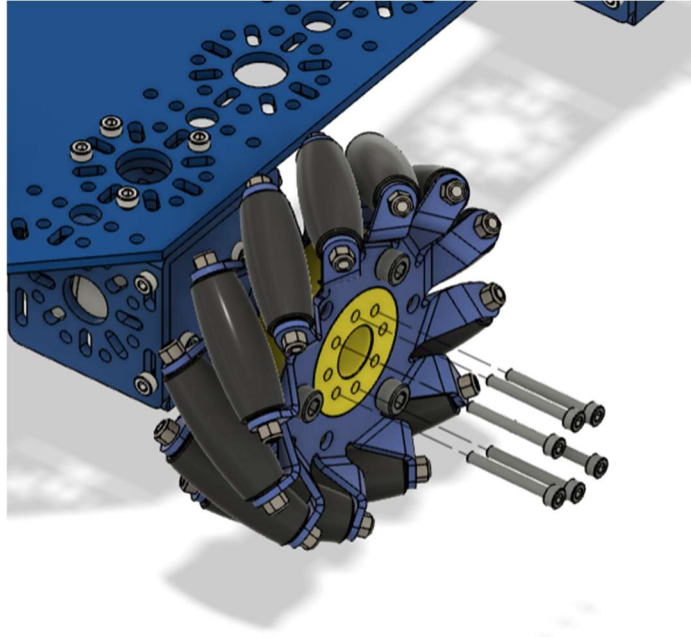
Insert a clamping hub V2 onto a motor shaft until the face of the shaft is a few millimeters from the face of the clamping hub. Tighten the 2 clamping screws.



Step 7

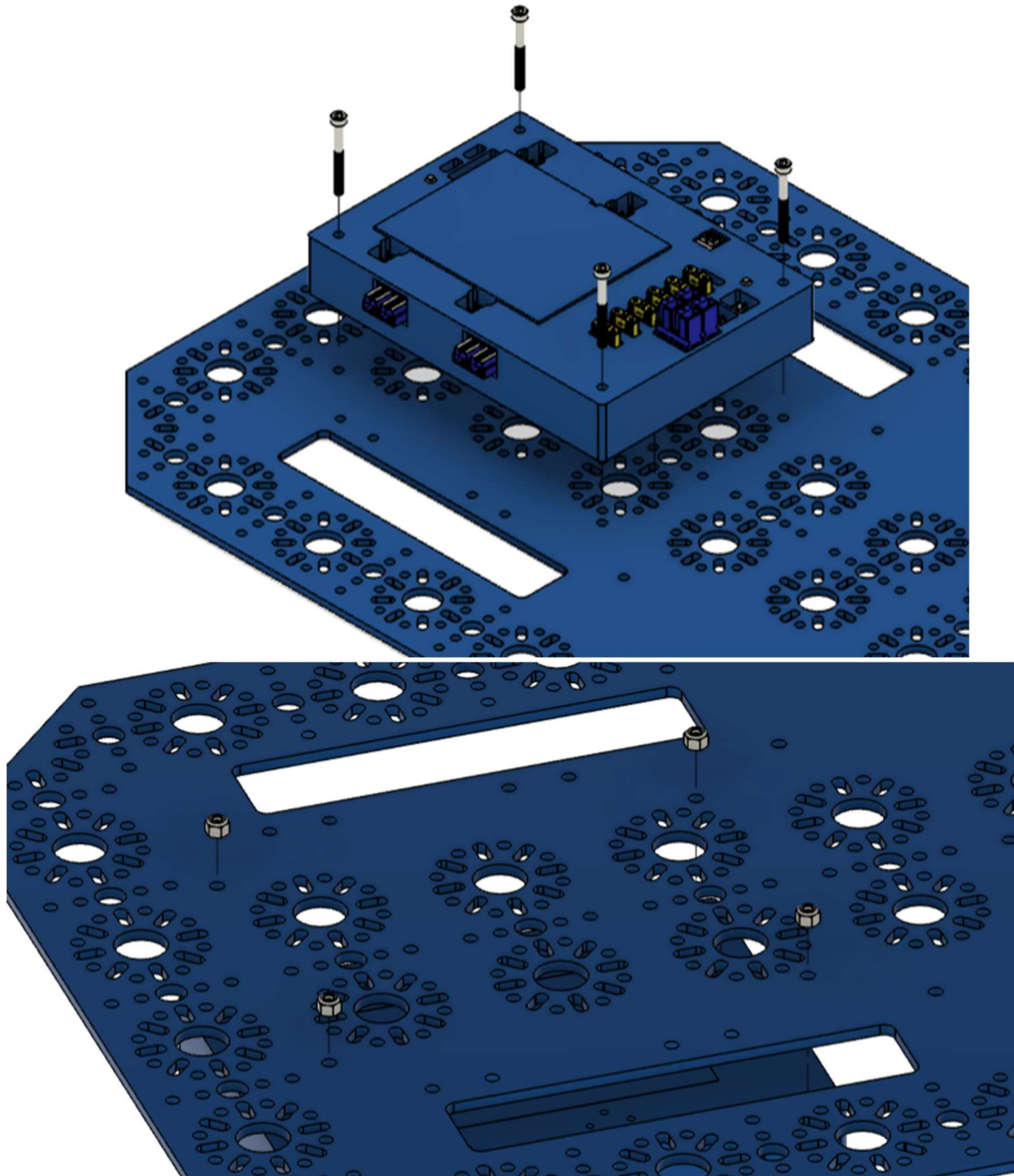
Insert 6 M3 x 25mm SHC Screws through the Mecanum Wheel and screw it into the clamping hub. Repeat this for the remaining wheels.

IMPORTANT NOTE: The rollers of each wheel should be pointed inward towards the wheel diagonal to it to form an "X" Shape. (Back Left Wheel pointing towards the Front Right Wheel, and Back Right Wheel pointing towards the Front Left Wheel)



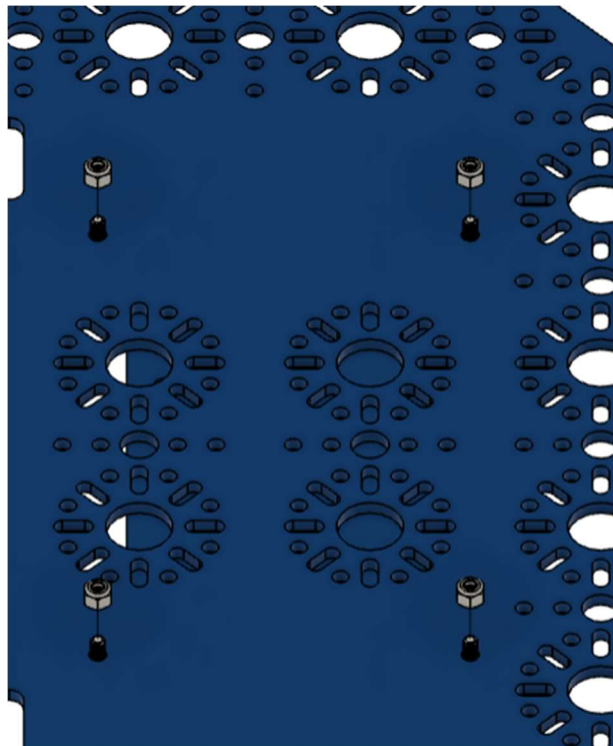
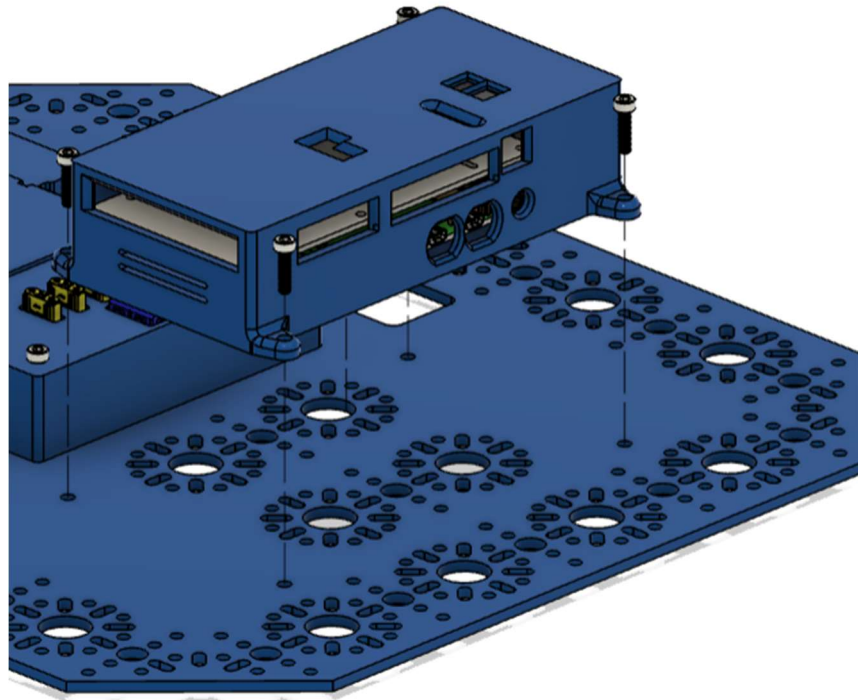
Step 8

Using 4 M3 x 30mm screws and 4 M3 Nylock nuts, secure the Titan Quad Motor Controller to another base plate.



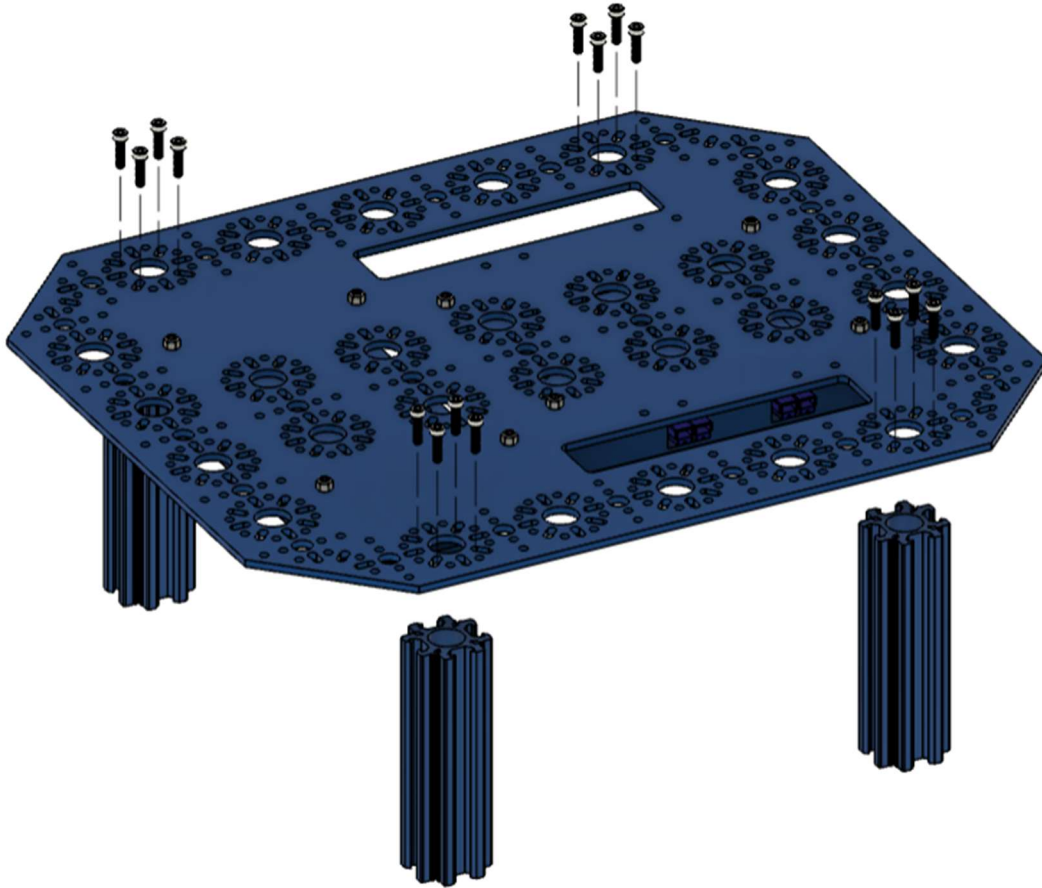
Step 9

Using 4 M3 x 12mm Screws and 4 M3 Nylock nuts, secure the VMX to the base plate from the previous step.



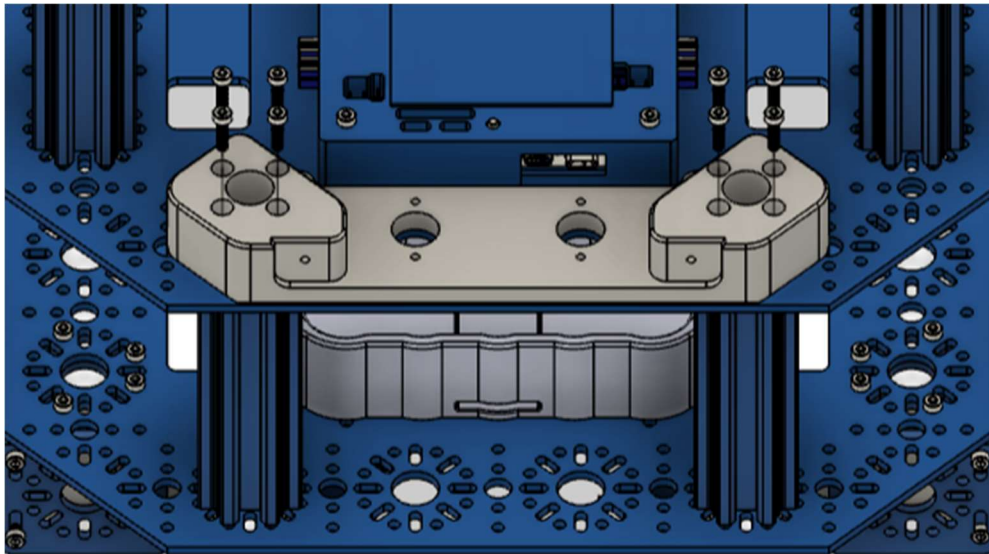
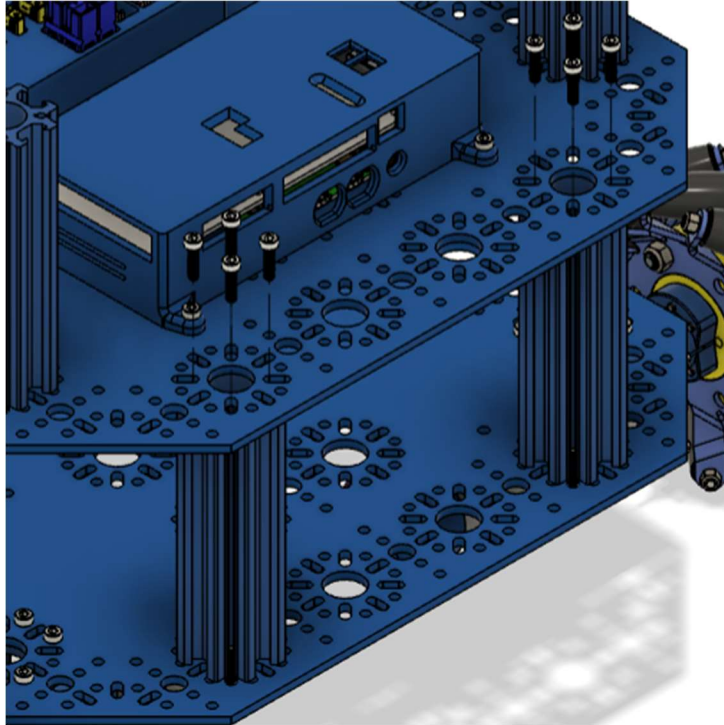
Step 10

Attach the remaining 4 T-slot extrusions to the baseplate from Step 8 & 9 using M3 x 12mm screws.



Step 11

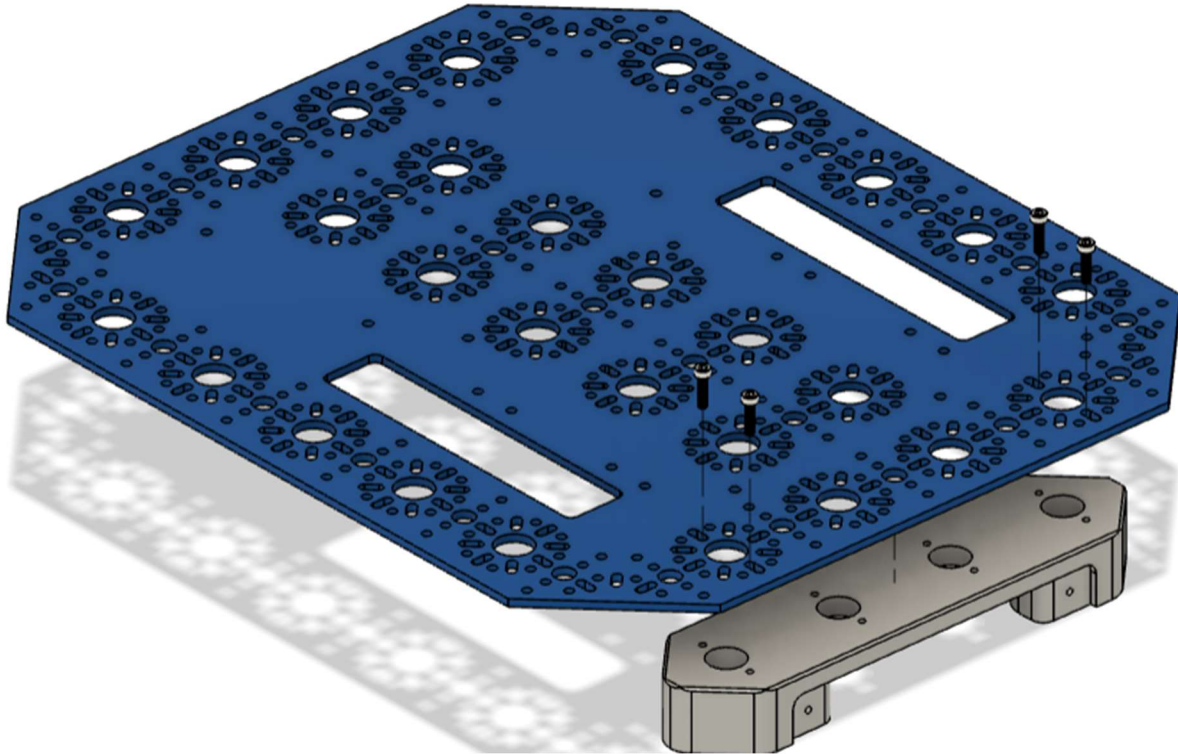
Attach one side of the baseplate to the existing T-slot extrusions with M3 x 12mm screws.



On the other side, put the screws through the control panel mount with M3 x 12mm screws.

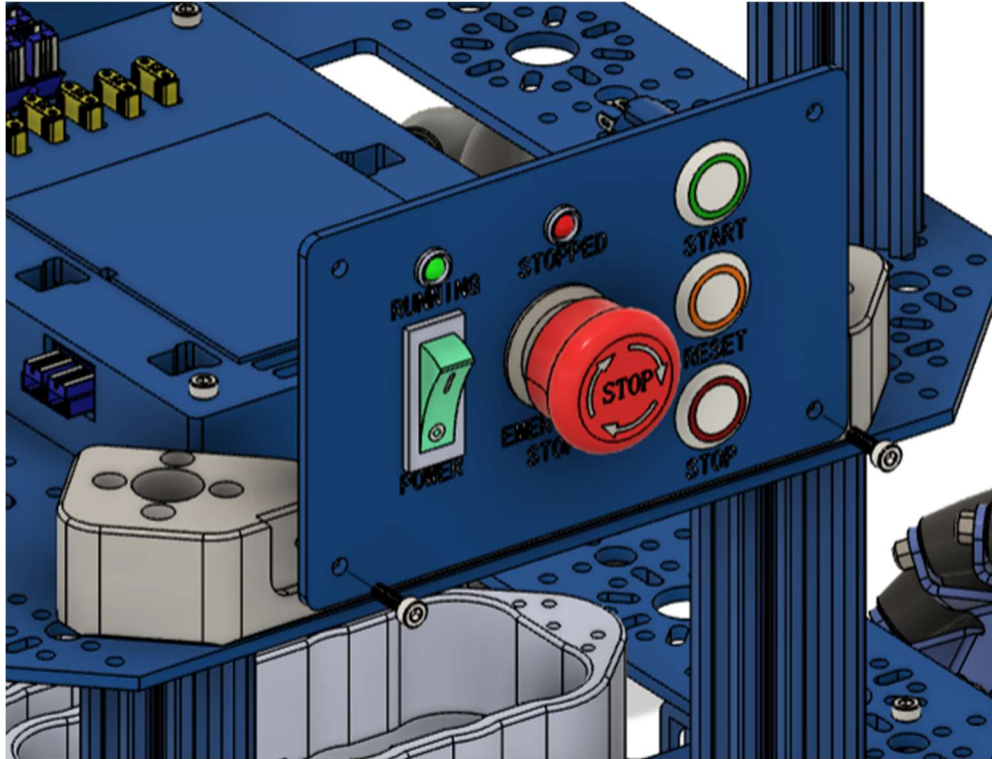
Step 12

Using 4 M3 x 12mm screws, attach the other control panel mount to the end of the final base plate. Don't over tighten these screws.



Step 13

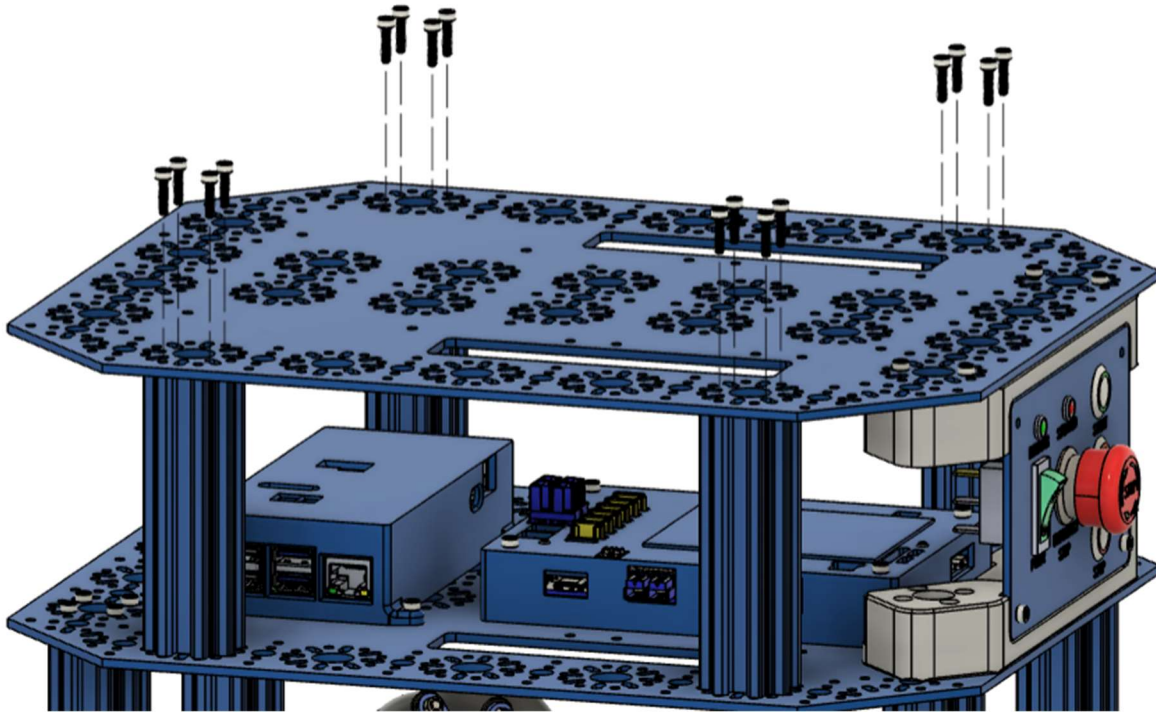
Using 2 M3 x 10mm screws, attach the control panel to the bottom mount on the robot. Don't over tighten these screws.



*** At this time the wiring should be done to allow for easier access before installing the top panel. ***

Step 14

Secure the top base plate from Step 12 with M3 x 12mm screws to all the T-slot extrusions.



Step 16

Secure the control panel at the top with 2 M3 x 10mm screws. Don't over tighten these screws.

