

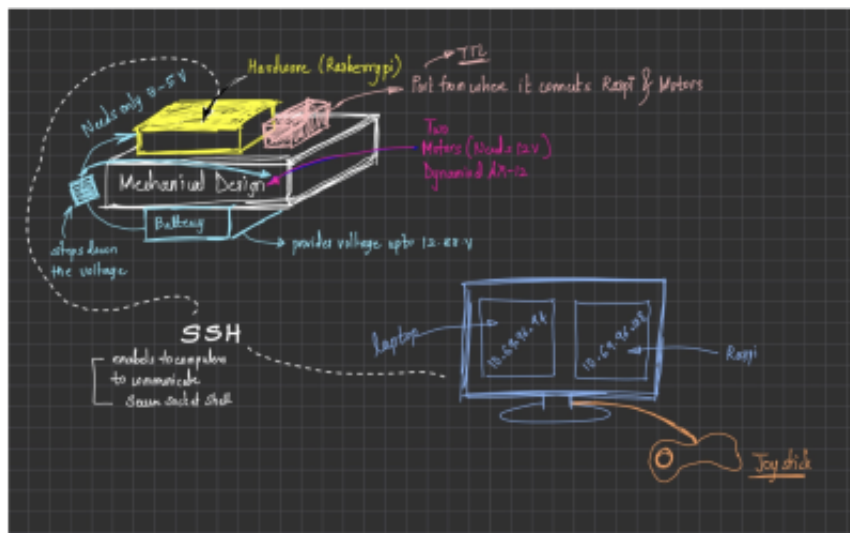


## **Week No. 4: Finally Got it in Motion.**

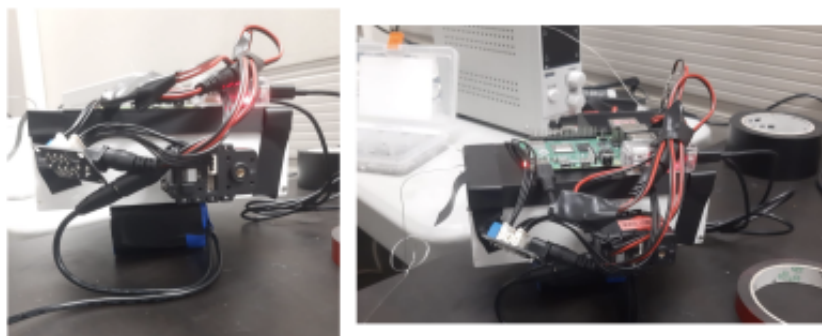
### **Photo of the week**



After getting the Raspberry Pi with the whole setup done, I started working on my code. The aim was to obtain a (initially) vertical motion of the end effector. For an effector to move vertically up or down, one motor should rotate clockwise and another should rotate counter-clockwise, or vice-versa. I prefer Python over C++ for coding. I wrote a subscriber node for that. I used the pub-sub of ROS for controlling motors. I integrated a joystick for that. The published was the joy node. After pressing specific buttons on the joystick, it will publish the values; after that, the subscriber will listen to it. The subscriber coil will start controlling the motor as given in the code.



The important task was to make the Raspberry Pi slave and my laptop as master. For that, I SSH into the Raspberry Pi for the sake of editing and running the node in its terminal. After debugging, the errors were fixed, and software and hardware integration was done.

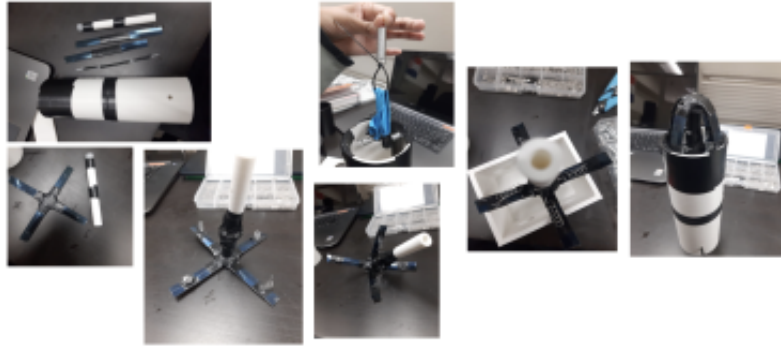


Another part was my design of the end effector that is putting everything in one bag! Using tapes and glue, I made a prototype. It's ugly-looking, but surely will make it better!

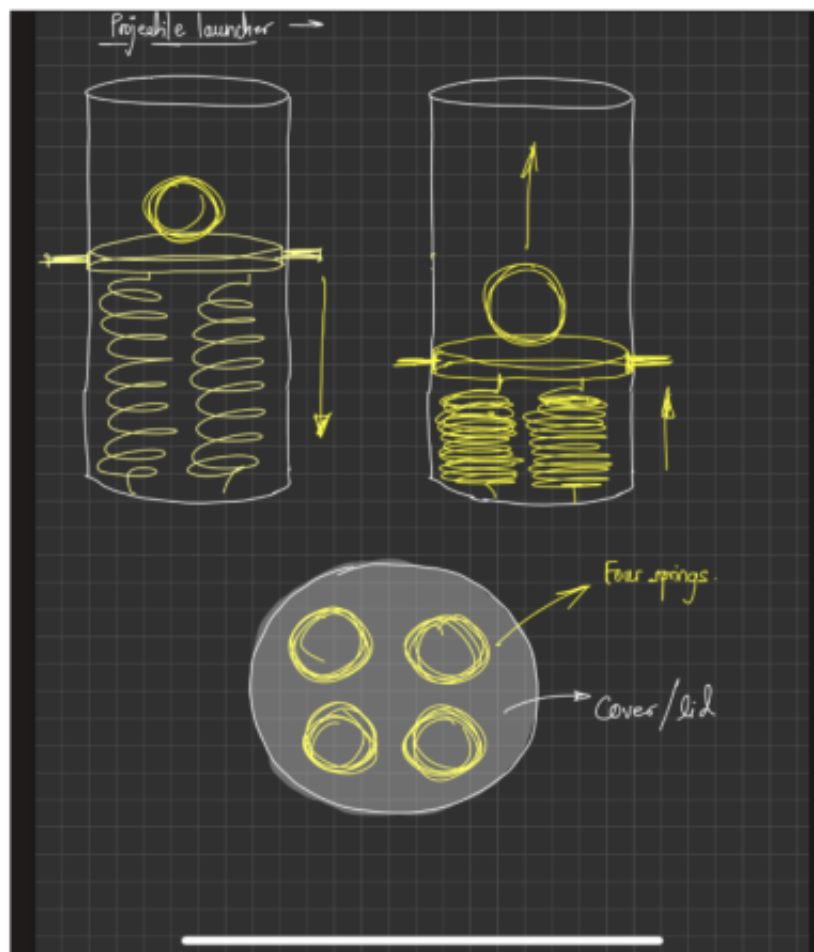


I attached strings to it & it moved vertically up & down! I was happy! I did it! The rush of dopamine in my body at that time was at its fullest! But my happiness vanished in some time since, due to stress concentration, one of the shafts broke.

## Projectile launchers: Design failed, Made another one!



I made one anchor and joined the parts for making its tube. The anchor made by me was too rigid. Due to its rigidity, it broke into parts! That design was surely not working. Hence, I thought of another one!



This week made me more self-sufficient. Somehow, once you are on your own, you have all the time in the world to plan. You start becoming self-reliant. Self-reliant doesn't mean that you don't need people or you don't need handholding; in my case, I would have never reached this stage without Prof. Anand Khandekar (my Guru in India) and John! Self-reliance is a different mindset, which provokes you to work relentlessly & persistently.