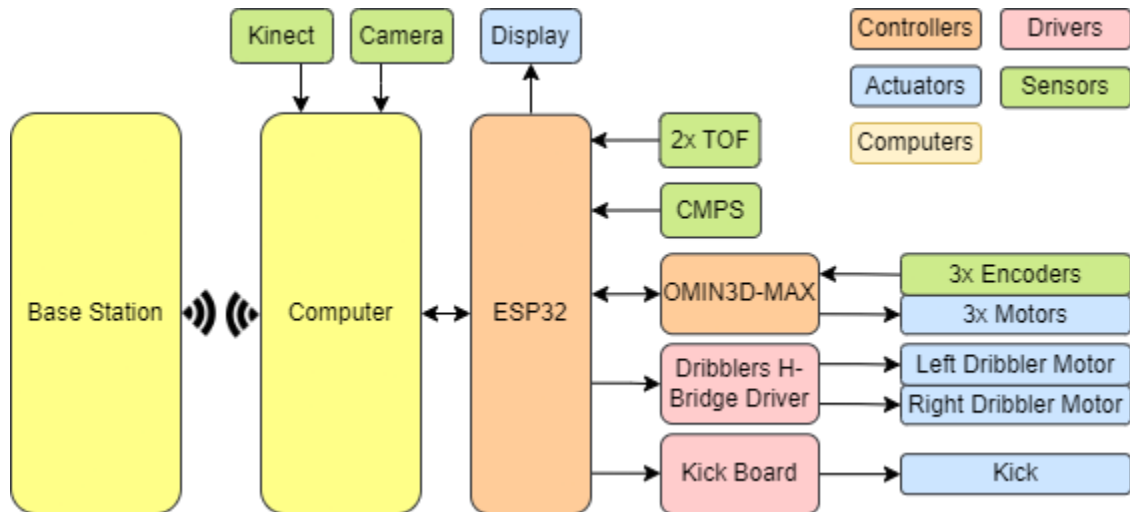


LAR@MSL – M.E.S. 2023



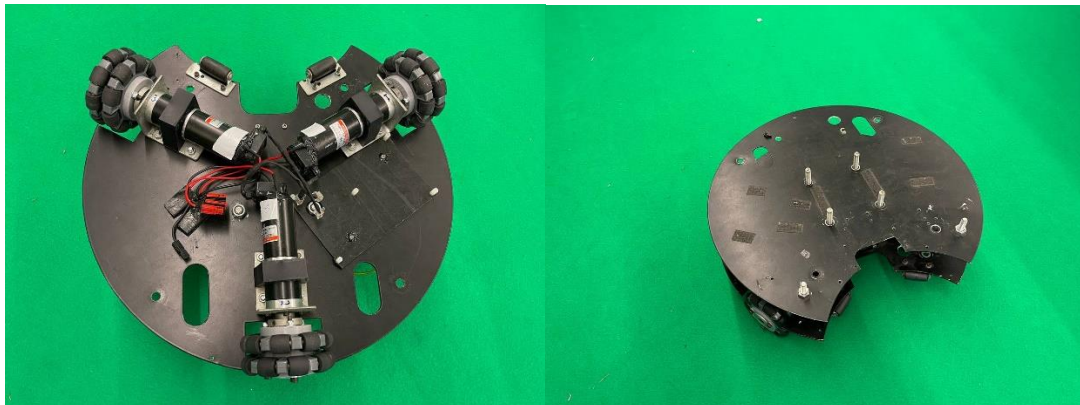
Overall Board Schematic



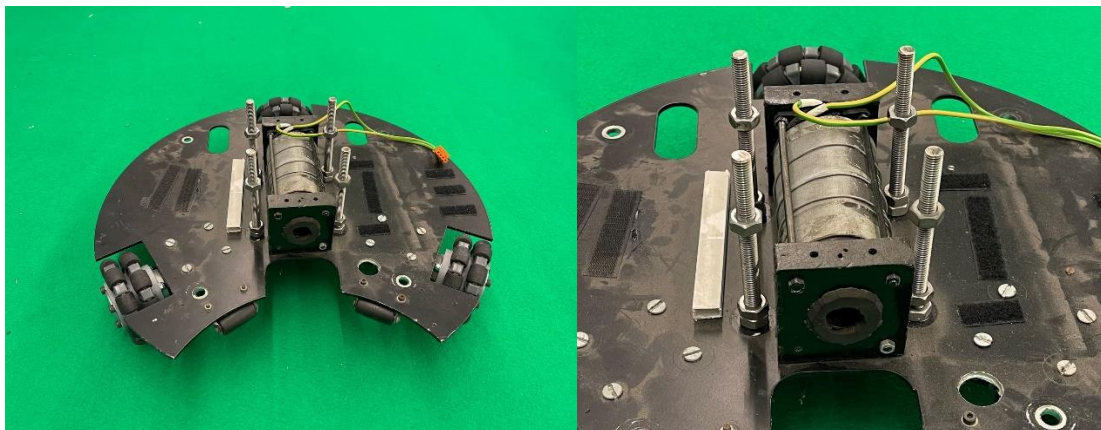
Mechanical Schematic

Mechanical schematics play a crucial role in the design and construction of complex systems, including robotics. In the case of a football robot, mechanical schematics are essential to understanding the various components that make up the robot and how they work together.

We start off with a 3-omniWheel Base controlled by the OMNI3MD-Max.



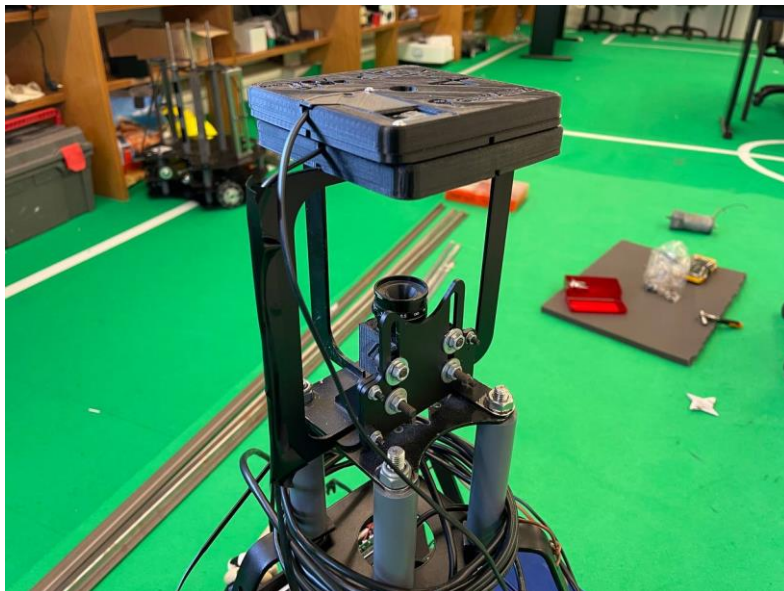
We start to add the Kick components, the kicking mechanism.



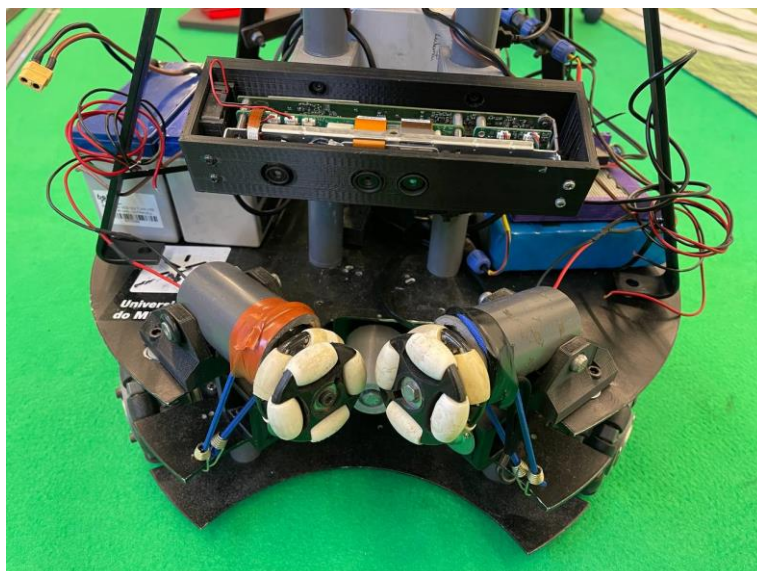
The next part is the support for the computers and its protection. Also here is visible the Main screws to give height where the camera will be attached.



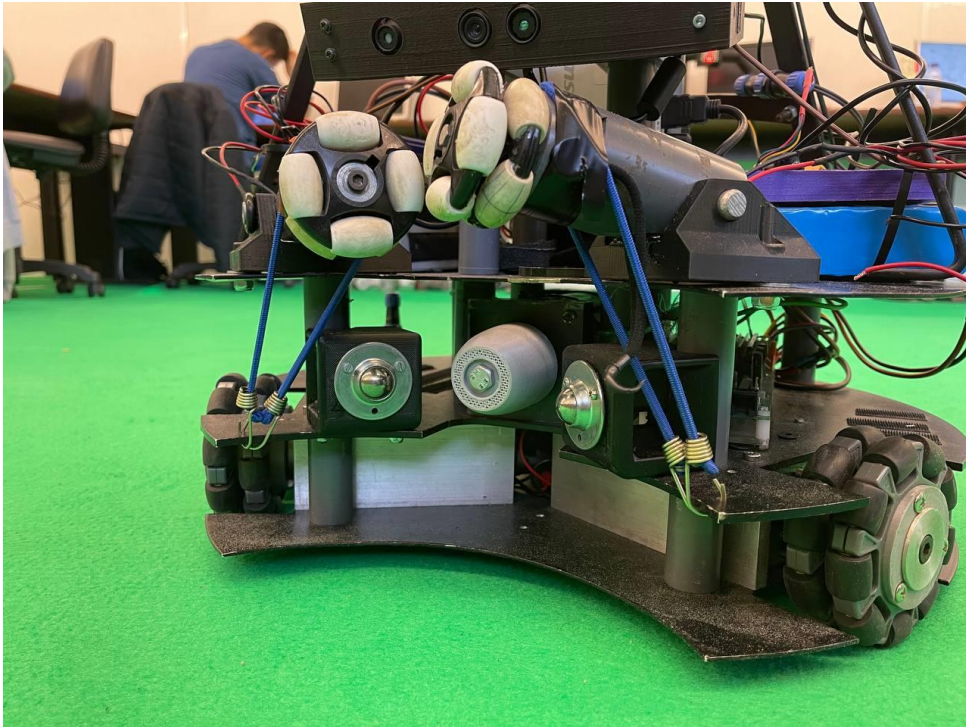
In the End we start to attach the Cameras and Boards to the robot, here is visible the Main omnidirectional camera pointing to a mirror.



Here is visible the Front facing Depth Camera (Xbox Kinect 360) and the Dribblers already attached to its place.

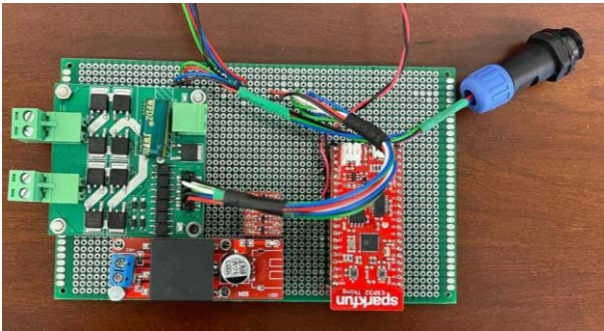
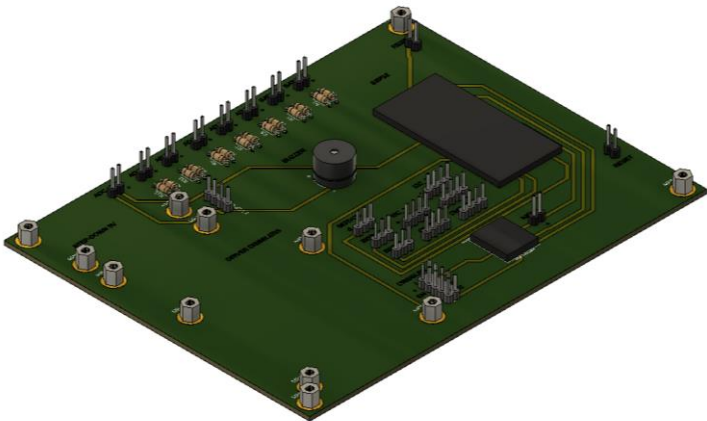
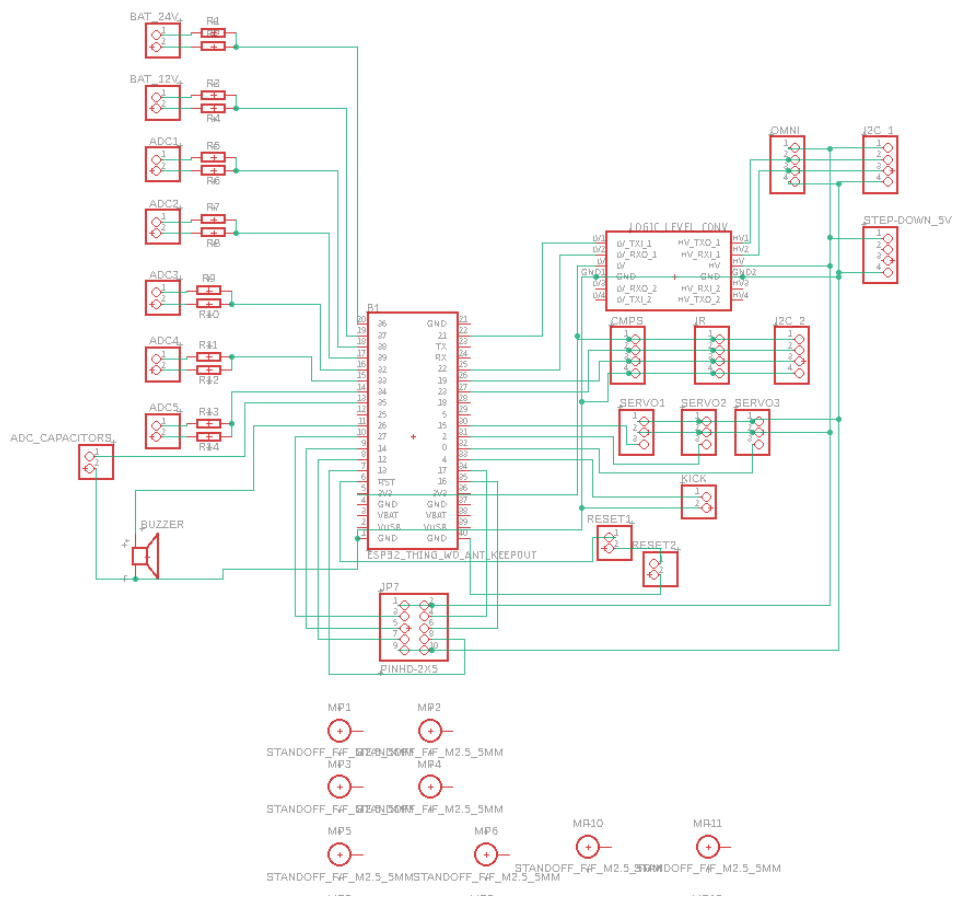


Here We can see up close the Kicking pendulum and the dribbler mechanism with its Rollers to help the ball on lateral movements.

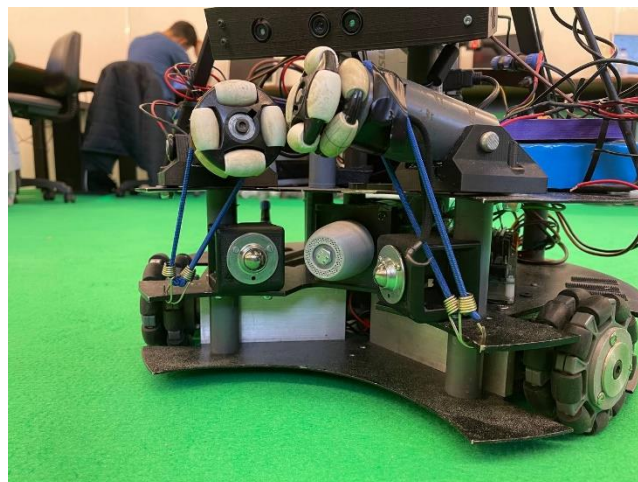
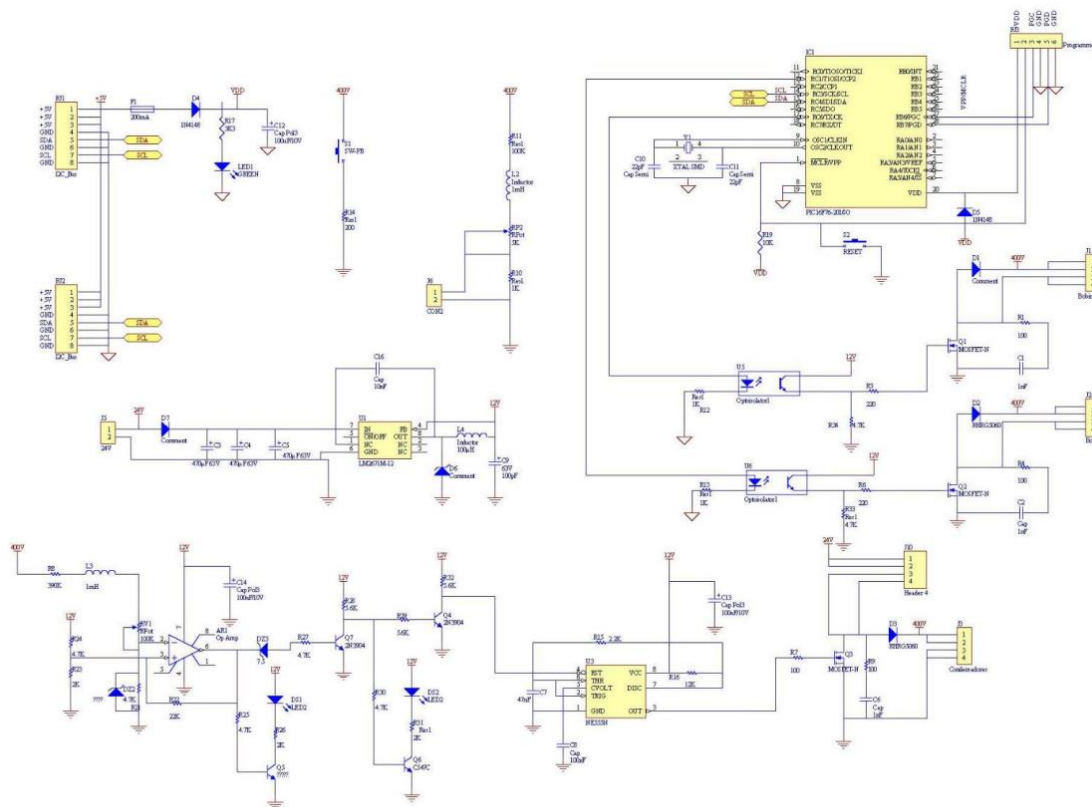


Electrical Schematic - In addition to the mechanical schematics, the electronic schematics of a football robot are equally crucial to its design and functionality. These schematics serve as a blueprint for the electrical system of the robot.

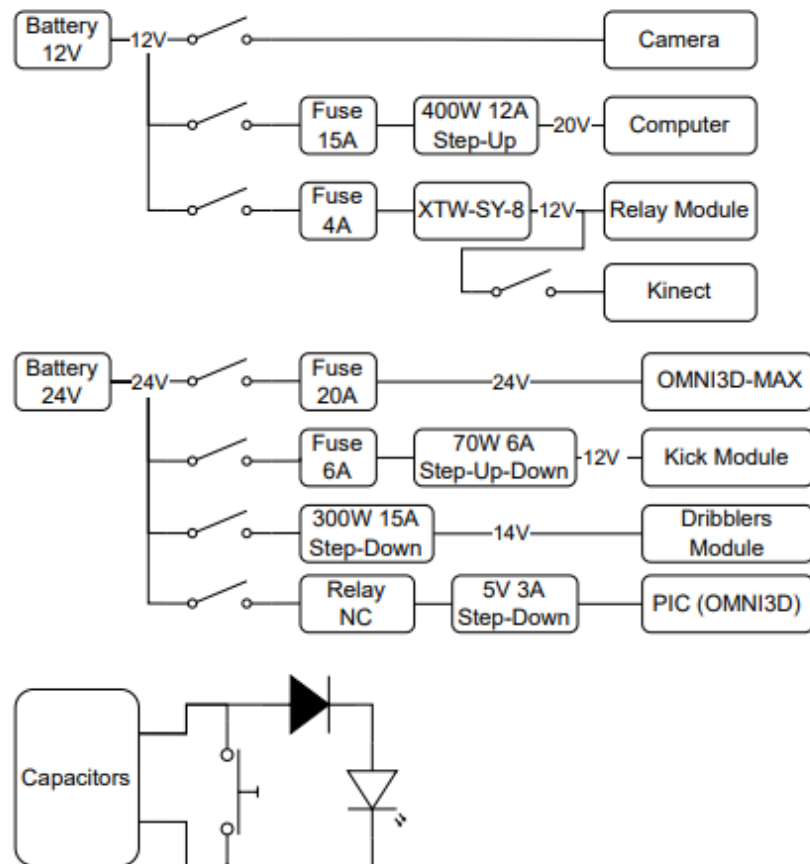
ESP32 Controller Board



Kicker

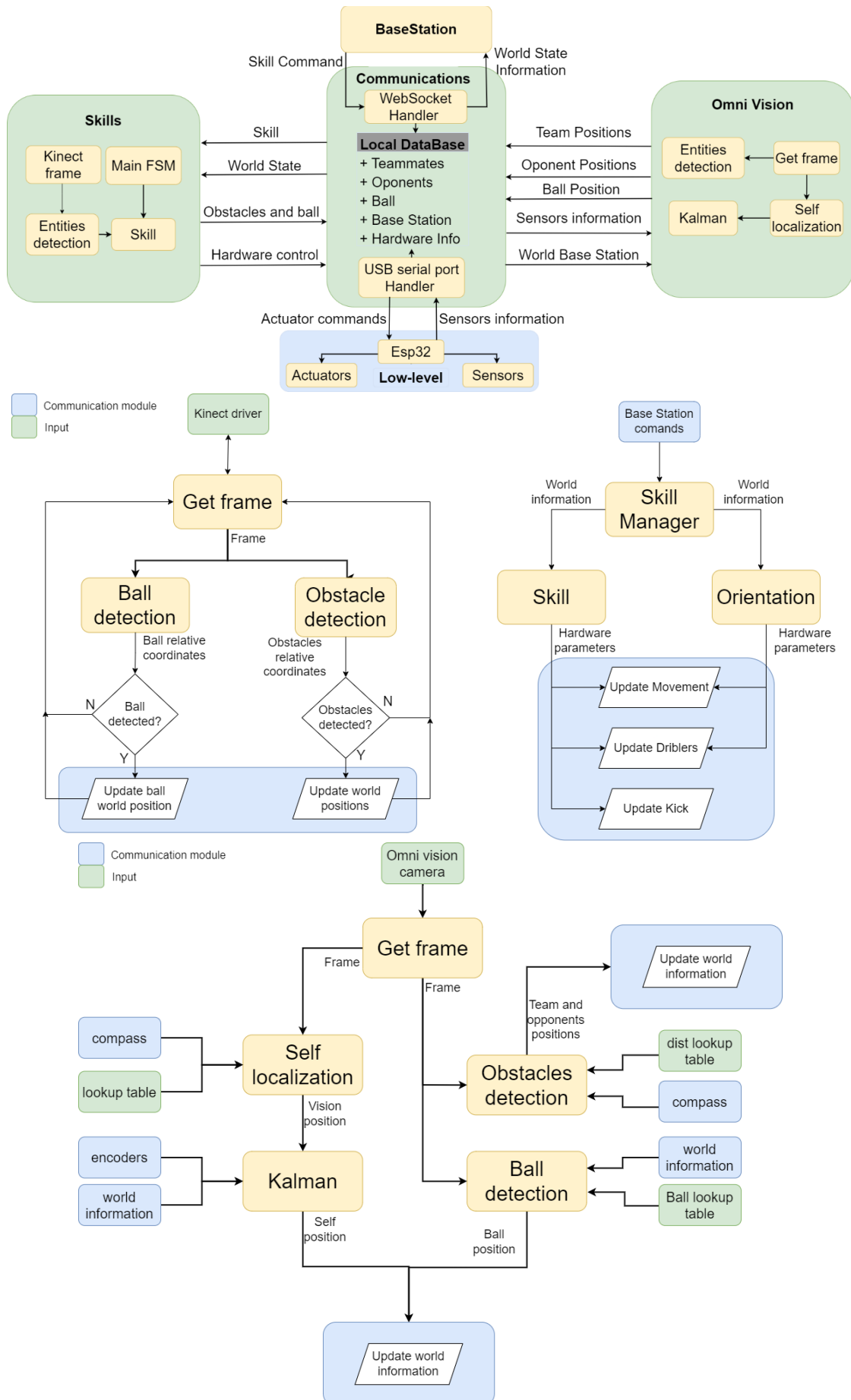


Power Box



Robot Code Schematic (Code Written in Golang and C)

The software schematics of a football robot are just as crucial as its mechanical and electronic schematics. These schematics provide a detailed overview of the programming logic and algorithms used to control the robot's movements and decision-making processes.



Basestation, Strategy and Data Flow Diagram (Code written in Python)

