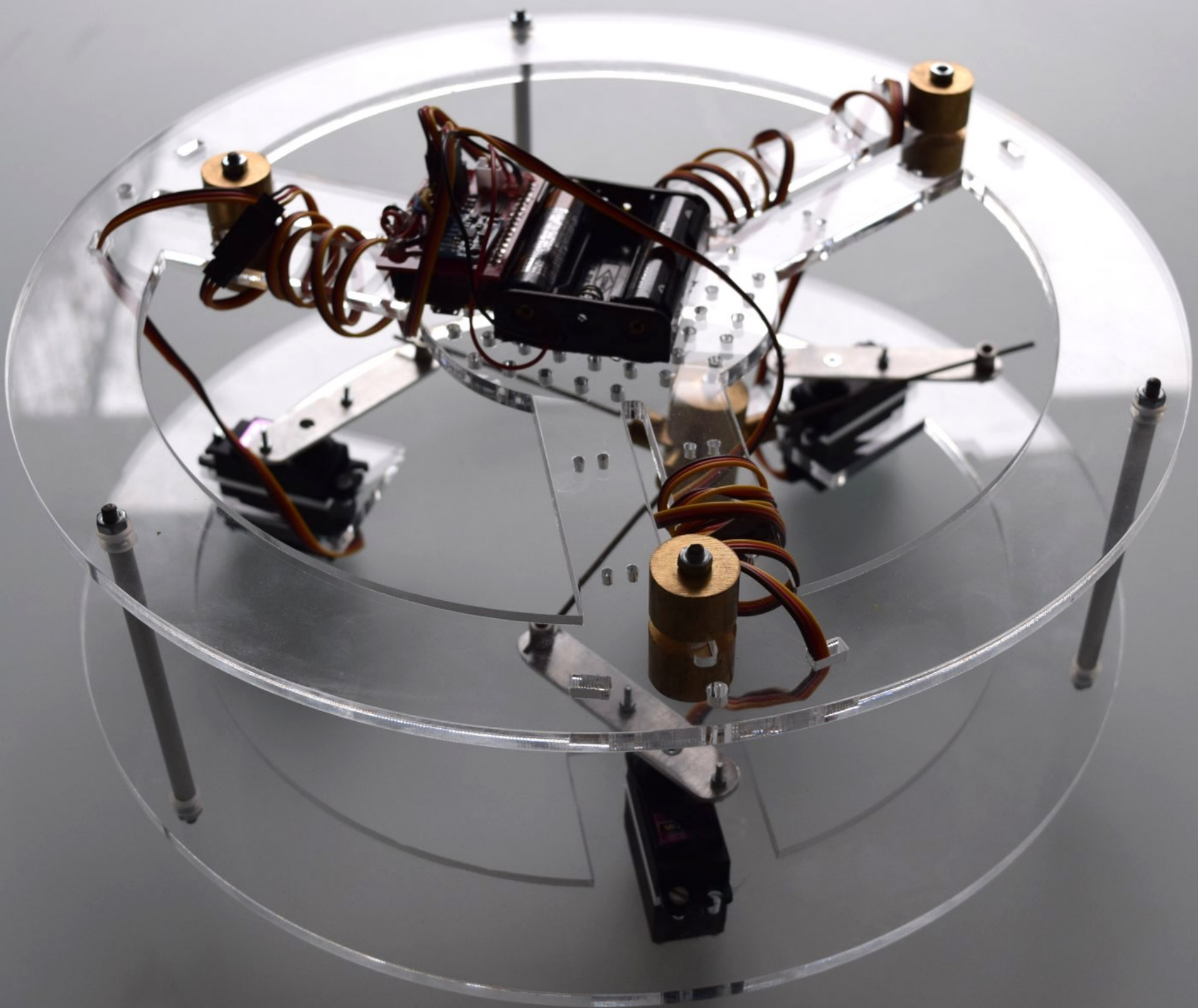


REMOTE CONTROL CYLINDER

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REMOTE CONTROL CYLINDER

This open-source project consists in the development of a remote controlled cylinder that uses servo motors to displace a mass in its center, which causes the cylinder to move. The final prototype that was built has a PMMA-based structure with a diameter of 32 cm. It is controlled using a C.H.I.P. Pro microcontroller and a dedicated board extension. The board includes two I2C slaves: a driver for four servo motors and a 6-axis IMU. Finally, the power supply is assured by a pack of three AA batteries. All the programming was made using JavaScript. The cylinder can be controlled remotely and can roll forwards and backwards, stop and keep itself balanced on a gentle slope. In addition, to make the control of the prototype easier, a web page was coded, which includes buttons and sliders. The movement characteristics of the cylinder have also been studied. This kind of design opens the doors to new types of vehicles with cylindrical or spherical wheels for the future of mobility.



To see all the files concerning the project,
please visit the GitHub repository:
opatiny.github.com/rc2

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