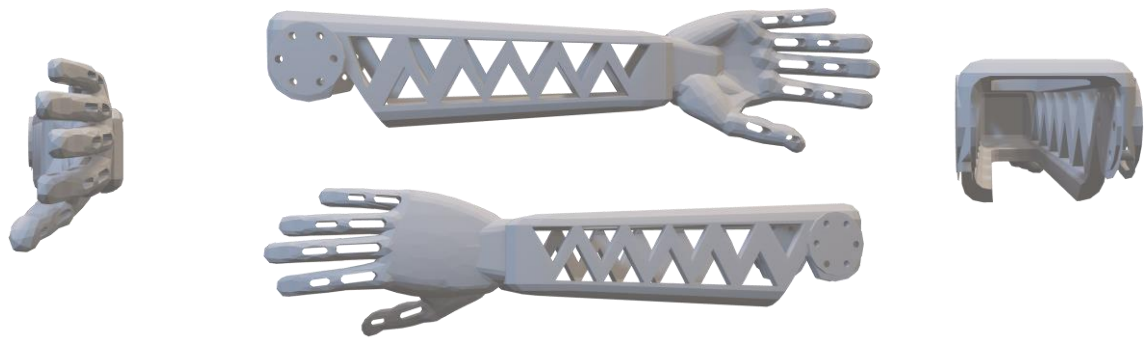


## Re-design poppy robot forearm part

### Overview:

Poppy humanoid: advanced and easy to use open source humanoid robot [1]. In this task, we redesigned the poppy forearm part.

### Design picture and the best motor:



The used motor:

#### 1. Mg99 motor specifications [2]:

Weight: 55 g

Torque: 9.4 kgf·cm (4.8 V), 11 kgf·cm (6 V)

Operating speed: 0.17 s/60° (4.8 V), 0.14 s/60° (6 V)

Operating voltage: 4.8 V a 7.2 V

#### 2. LD-260MG motor specifications [3]:

Weight: 163 g

Torque: 58 kg·cm (6.0V); 65 kg·cm (7.4V); 70 kg·cm (8.4V)

Operating voltage: 6.0-8.4V

Operating speed: 0.17 s/60° (6 V), 0.15 s/60° (7.4 V), 0.13 s/60° (8.4)



**Conclusion:**

The second one, although the first one is lighter, and it requires less voltage and faster but the second one produce high torque and this is important in robotics' applications.

**References:**

- [1] <https://www.poppy-project.org/en/robots/poppy-humanoid/>
- [2] [electronicoscaldas.com/datasheet/MG996R\\_Tower-Pro.pdf](https://www.electronicoscaldas.com/datasheet/MG996R_Tower-Pro.pdf)
- [3] [https://ar.banggood.com/LOBOT-LD-260MG-180-60KG-Large-Torque-Metal-Gear-Digital-Servo-For-RC-Robot-p-1516607.html?cur\\_warehouse=CN](https://ar.banggood.com/LOBOT-LD-260MG-180-60KG-Large-Torque-Metal-Gear-Digital-Servo-For-RC-Robot-p-1516607.html?cur_warehouse=CN)