MODELING PROGRESS:

The parts were resized based on the newly provided measurements, and some components were redesigned for aesthetic reasons or due to inaccuracies in the original base model.

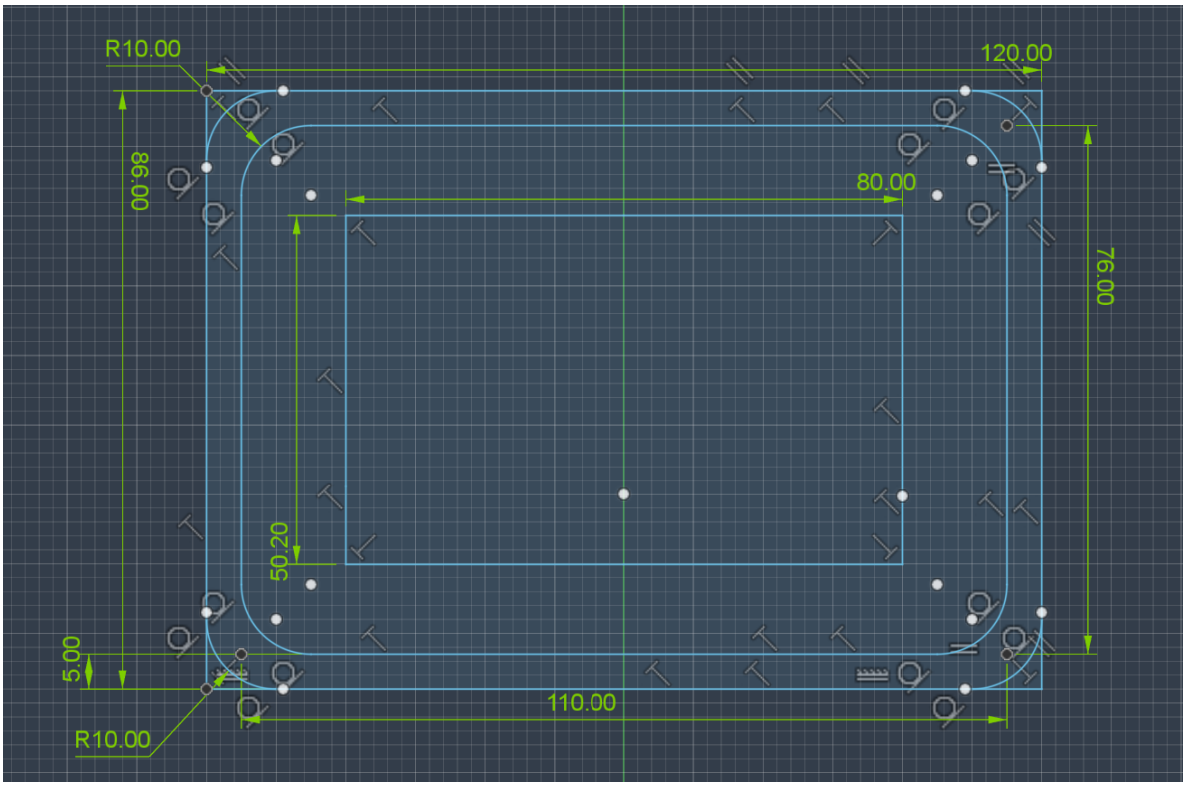
Resized parts:

• Grippers (hands)
• Arms
• Wrists
• Base

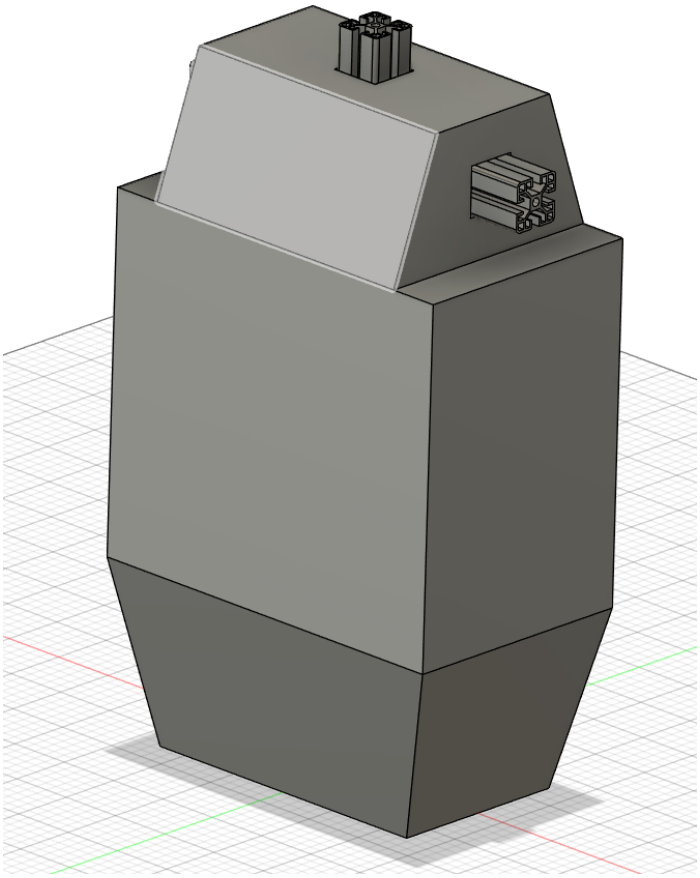
Redesigned parts:

• Head:

- Height: 193 mm
- Length (left–right): 150 mm
- Width: 132 mm
- Visor protrusion: 6 mm (should match the display's protrusion)
- Visor frame (based on the space required for a 128x64 LCD display):



- **Torso:**
  - **Lower section:** An inverted trapezoid. The lower rectangle measures 150 × 250 mm. The upper rectangle is located 145 mm above the reference and measures 200 × 320 mm. This body was hollowed with a wall thickness of 1 mm.
  - **Middle section:** The torso span is a rectangular volume of 200 × 300 × 290 mm (also hollowed with a 1 mm wall thickness).
  - **Upper section:** This section features a trapezoid centered with respect to the torso. Its lower rectangle measures 200 × 240 mm, while the upper face measures 120 × 240 mm. This part is cut and has no angled faces on the lateral sides.



***PENDING / TO BE DEFINED*:**

- **Wiring and connections**
- **Internal channels**
- **Guides and fastening screws**
- **Speaker openings and possible ventilation**
- **Feasibility of prismatic joints**
- **Internal component layout**

***POTENTIAL ISSUES*:**

- **Kinect size constraint:** The Kinect dimensions exceed the head length (v2 model: 24.9 cm; v1 model: 23 cm vs head: 15 cm). Based on the updated design constraints, the head length must not exceed 19.3 cm. Therefore, the Kinect cannot be fully concealed inside the head and would protrude on both sides (approximately 4 cm per side), resulting in a less aesthetic appearance and potentially introducing a slight forward balance shift.

- **Potential weight imbalance:** If the internal wiring and components within the head are not properly distributed, the center of mass may shift forward due to both the Kinect and the display. This could lead to increased mechanical stress and long-term wear on the neck mounting.

- **Lack of waist mobility:** The robot may have trouble picking up objects close to the ground due to the inability to tilt its upper body. For this reason, the implementation of some form of prismatic joint in the arms was considered to compensate for this limitation.