Problem 3: Cuboid–Cuboid Collision Detection

The command line print out for the responses to Table 1 in the assignments is below.

```
Collision between block 0 and given test block:   False
Collision between block 1 and given test block:   False
Collision between block 2 and given test block:   True
Collision between block 3 and given test block:   True
Collision between block 4 and given test block:   True
Collision between block 5 and given test block:   False
Collision between block 6 and given test block:   True
Collision between block 7 and given test block:   True
```

The picture of the robot's bounding boxes is below.
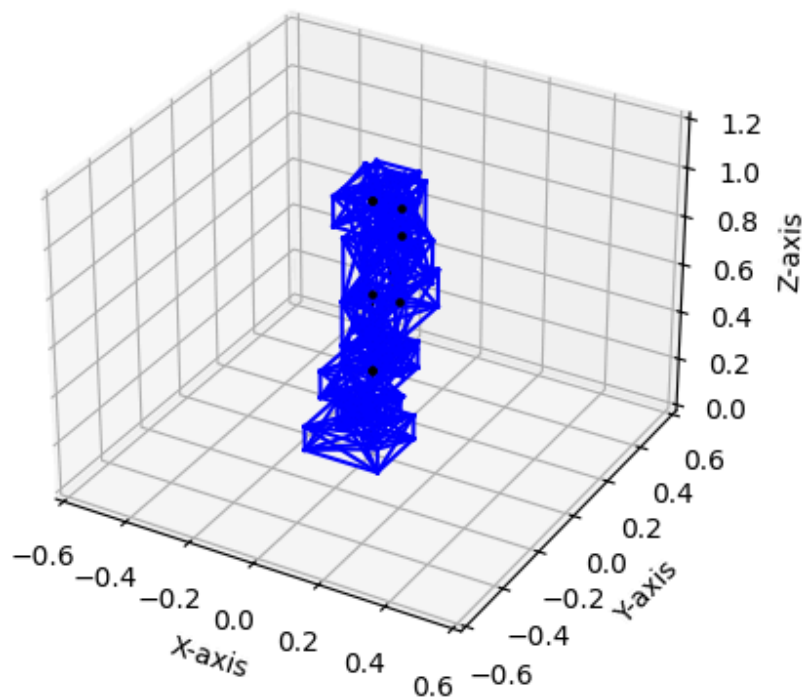
Problem 4: Franka RRT Motion Planning

Link to video of motion planning without path shortening:

📄 Without_Path_Shortening.mp4

Link to video of motion planning with path shortening:

📄 Path_shortenning.mp4

Problem 5: PRM Motion Planning

Link to video:

📄 PRM.mp4