

# COZMO CUBE MANIPULATION

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# OBJECTIVES

- Manipulate magnetic cubes
  - Including custom magnetic adapter
- Pickup cube and place at arbitrary pose
- Build wall out of cubes

# BIGGEST CHALLENGE

- Designing the magnetic lift adapter
  - Must not block view
  - Must be able to hold cube, but also be able to release it when lift is down
  - Needed leverage above and below magnet



# MOST INTERESTING PART

- Magnetic adapter uses “V” shape for leverage points
- This avoid blocking the camera

# FUTURE WORK

- For cube posing, Cozmo's approach angle is unspecified
- For wall building, "paperclip" must always be in center, and other cubes have fixed positions relative.
  - Angle of wall is fixed based on orientation of paperclip cube
- For magnetic cube, cube blocks view while held.