COZMO CUBE MANIPULATION

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OBJECTIVES

- Manipulate magnetic cubes
 - Including custom magnetic adapter

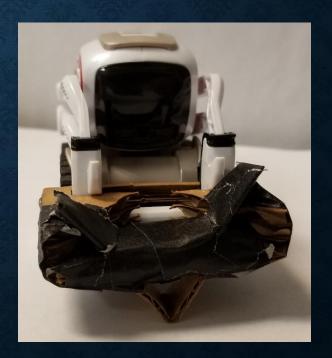
• Pickup cube and place at arbitrary pose

• 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.