

Robots that Learn to Communicate through Natural Human Dialog



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Challenge

- Learn to ground and interpret natural language robot commands thru natural interactive dialog.

Solution

- Integrated semantic parsing learning, RL dialog policy learning, and opportunistic active learning using natural language dialog.
- Multi-modal (visual, haptic, & audio) learning for lexical grounding.



Move a rattling container from the lounge by the conference room to Bob's office.

Scientific Impact

- Novel learning methods for improving grounded language interpretation using natural language dialog.

Broader Impact

- Allow novice users to command robots using natural language dialog.
- Improve education for grad, ugrad (FRI), and HS (First Bytes) students.
- Measure improved command interpretation due to learning from natural language dialog.