

1 Summary

1. Suction grasp is widely used for pick-and-placed tasks in industry and warehouse order fulfillment. Suction has an advantage over parallel-jaw or multi-finger grasping due to its ability to reach into narrow spaces and pick up objects with a single point of contact.
2. Apply the approach taken in dex-net 2.0 to to suction grasp.
3. Propose a new model to evaluate grasp robustness of suction-based grasp by analyzing seal formation and wrench resistance.
4. Achieves success rate of 98%, 82%, 58% on basic (prismatic or cylindrical), typical (with more complex geometry), and adversarial (with few available suction-grasp points) respectively.

2 Questions

1. What does it mean for an object to have a single point of contact?
2. What is a compliant suction contact model?