Motion Planning for Recycling Robotics: Progress Report

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Intro

- We are building a simulated robot to manipulate objects on a conveyor belt
- The desire to improve recycling efficiency inspired our project

Review: Last Semester's Work

- The core CAAM in our project comes from optimization
- Last semester we studied the math behind this optimization
- Comes in two kinds: optimizing path and optimizing picking strategy

Current Progress Outline

- Custom Jacobian
- Initial guess optimizations
- 3D robot animation

Custom Jacobian

Initial Guess Optimization

3-D Robot Animation

Semester Goals Outline

- Online optimal path finding
- Moving conveyor belt
- Temporal goal planning

Moving Conveyor Belt

End