Week 7 Update

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Project Overview

- Project Title: Efficient and Robust VLA Models for Real-Time Robotic Manipulation
- Issue: Current VLA models are too
  - Slow
  - Computationally expensive
- Goal: Make smaller faster VLA models





Robot Update

- It picks up the can!
- 30% success rate
- Previous issues:
  - Mismatched norm stats
  - Extremely limited movement allowance (runner issue)
  - Gripper command issue

Compression

- Recap: Model accuracies change significantly when LIBERO suites change
- Want to change which suites we train with
- Collected data from LIBERO Goal and LIBERO 10
  - LIBERO 10 is hardest, so want to evaluate with this
- Models also started taking a lot longer to train

Compression Comparison

- Same models types trained across 3 different suites
- Important to figure out what to improve on
- Recap on 4 trained models (top performing models)
  - 1 step strengthened Score DM
  - 3 step strengthened Score DM
  - 1 step strengthened Score DM w two-time scale update
  - 3 step strengthened Score DM w two-time scale update

Compression Suite Comparison



Next Steps

- Finish evaluating on LIBERO 10
- Improve compression (want 90-95% accuracy)
- Further evaluation on robot arm performance

Backup: Distribution Matching Distillation

