

# AAIT Project - Crafter

Team:

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Students:

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# Methods

## Agents

- DQN
- DDQN
- Dueling DQN

## Objective Functions

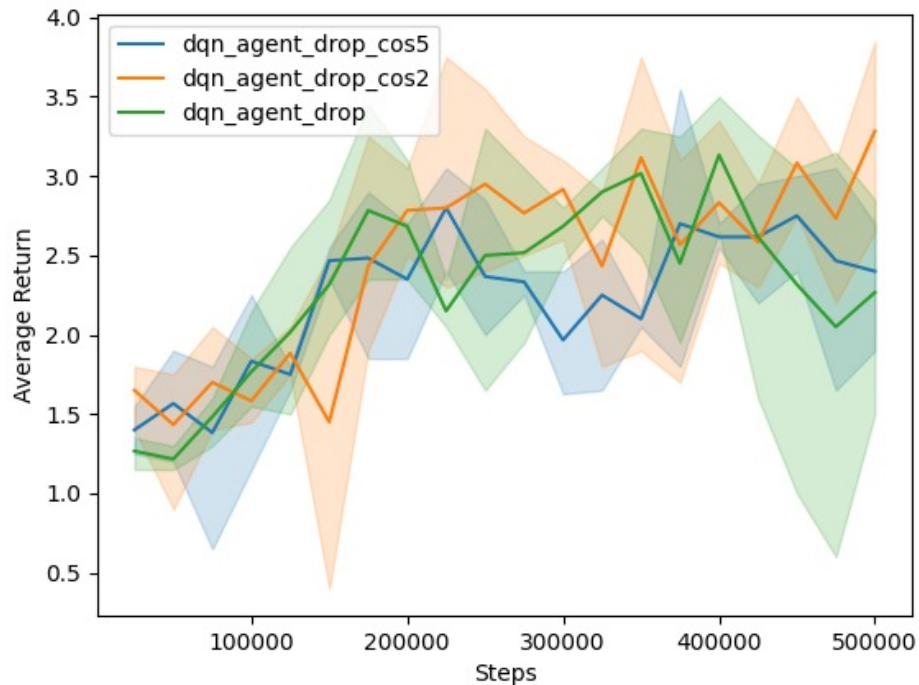
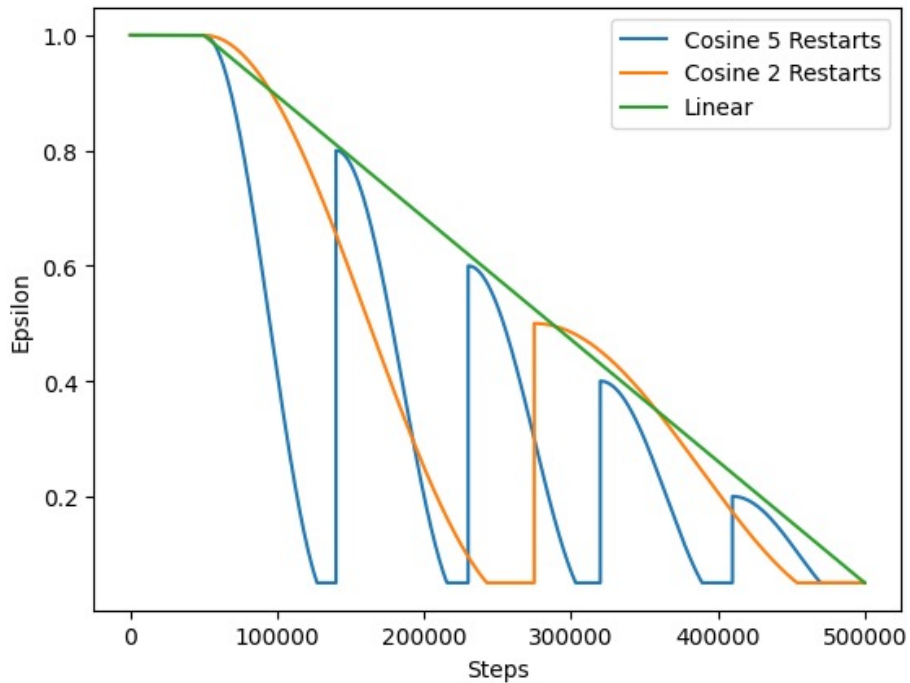
- MSE
- Munchausen

# Enhancements

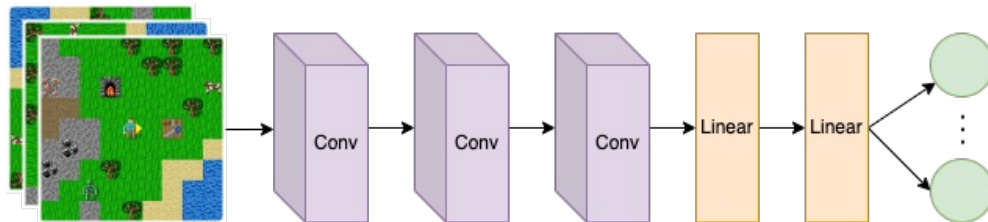
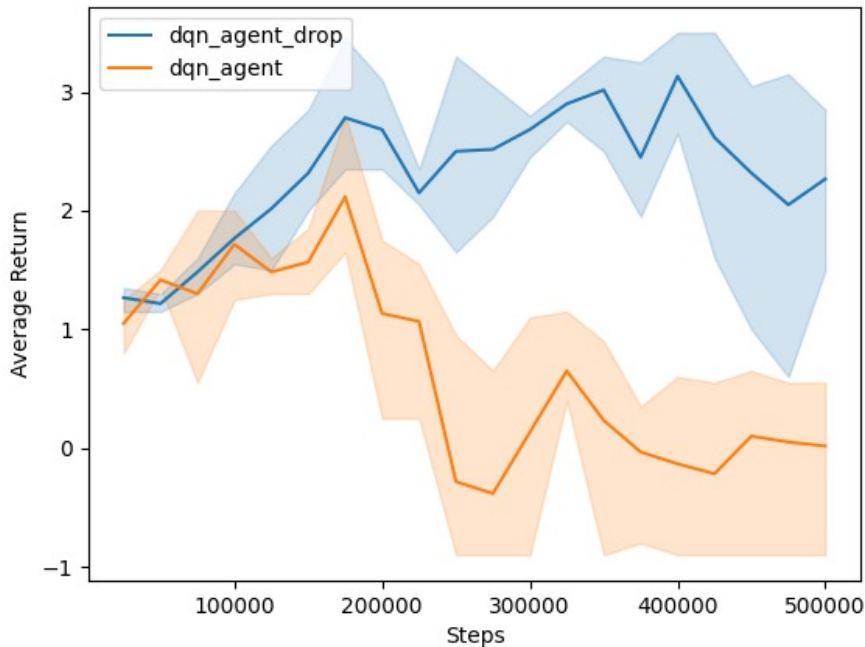
Starting from DQN:

- Network Architecture (Dropout, Batch Norm)
- Exploration Policy
- Hyperparameter Tuning
- DDQN & Dueling DQN

# Exploration Matters



# Estimator Architecture

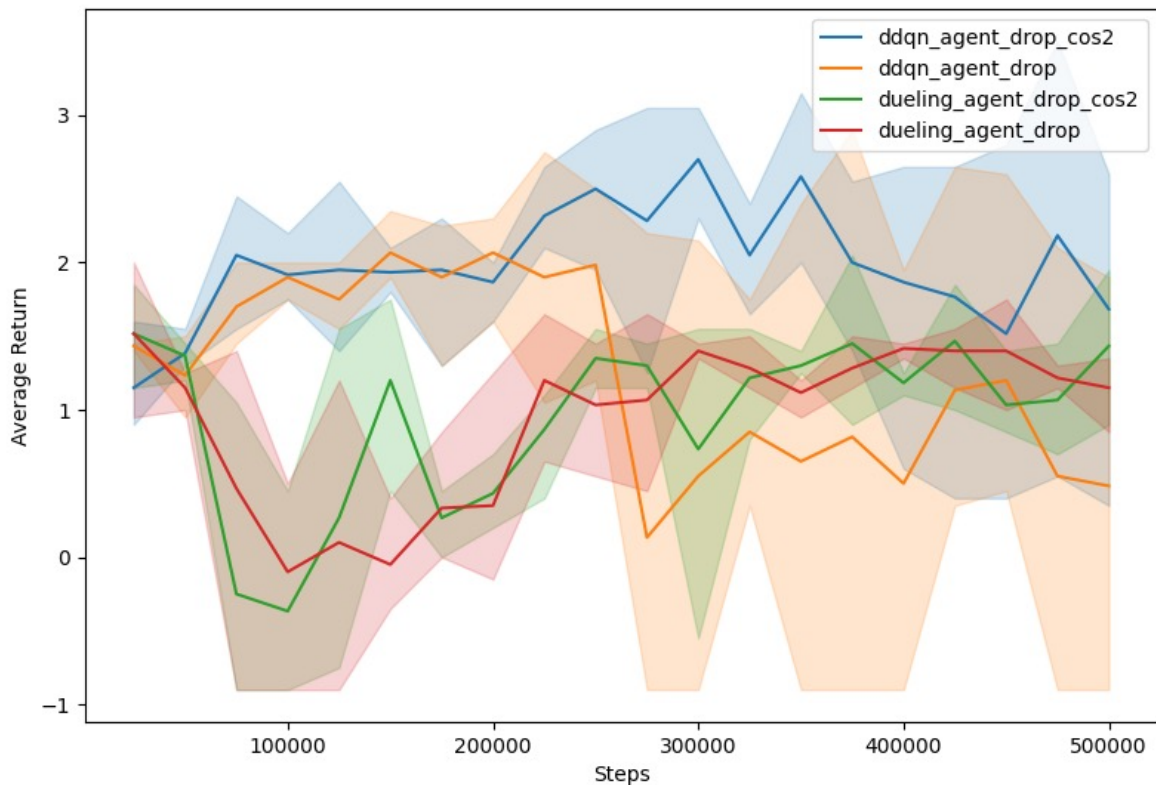


- 5-Layer CNN

- Batch Norm ✗

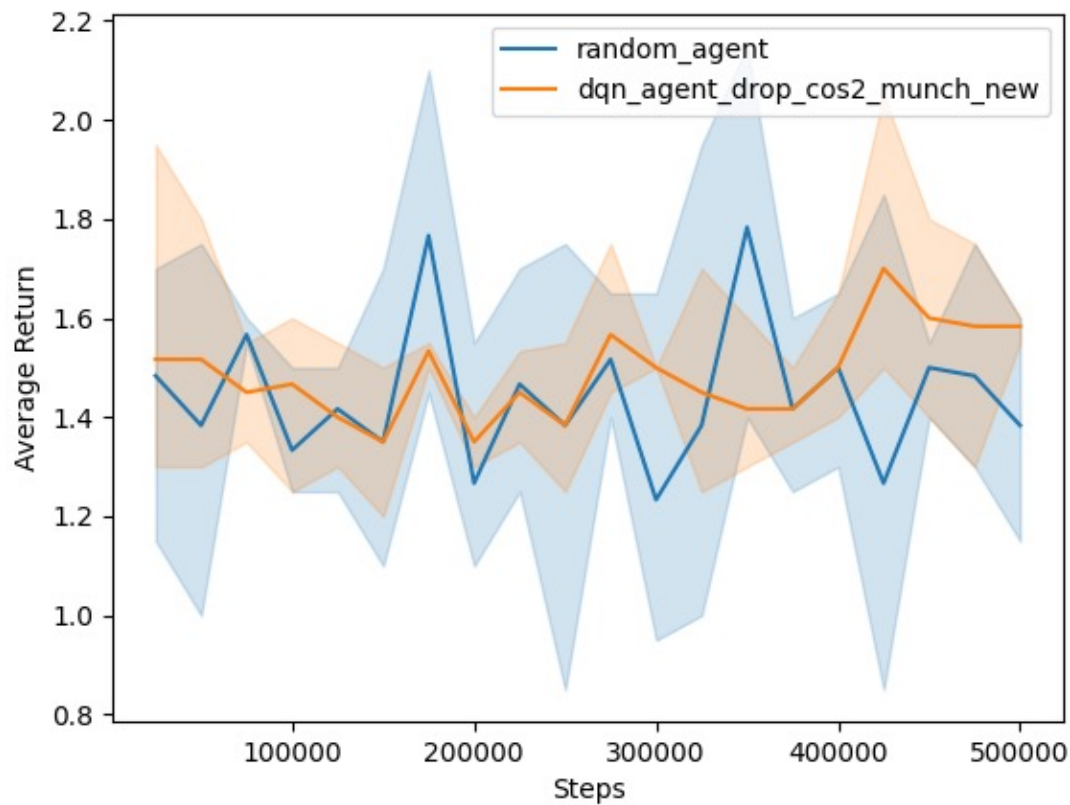
- Dropout ✓

# DDQN & Dueling DQN

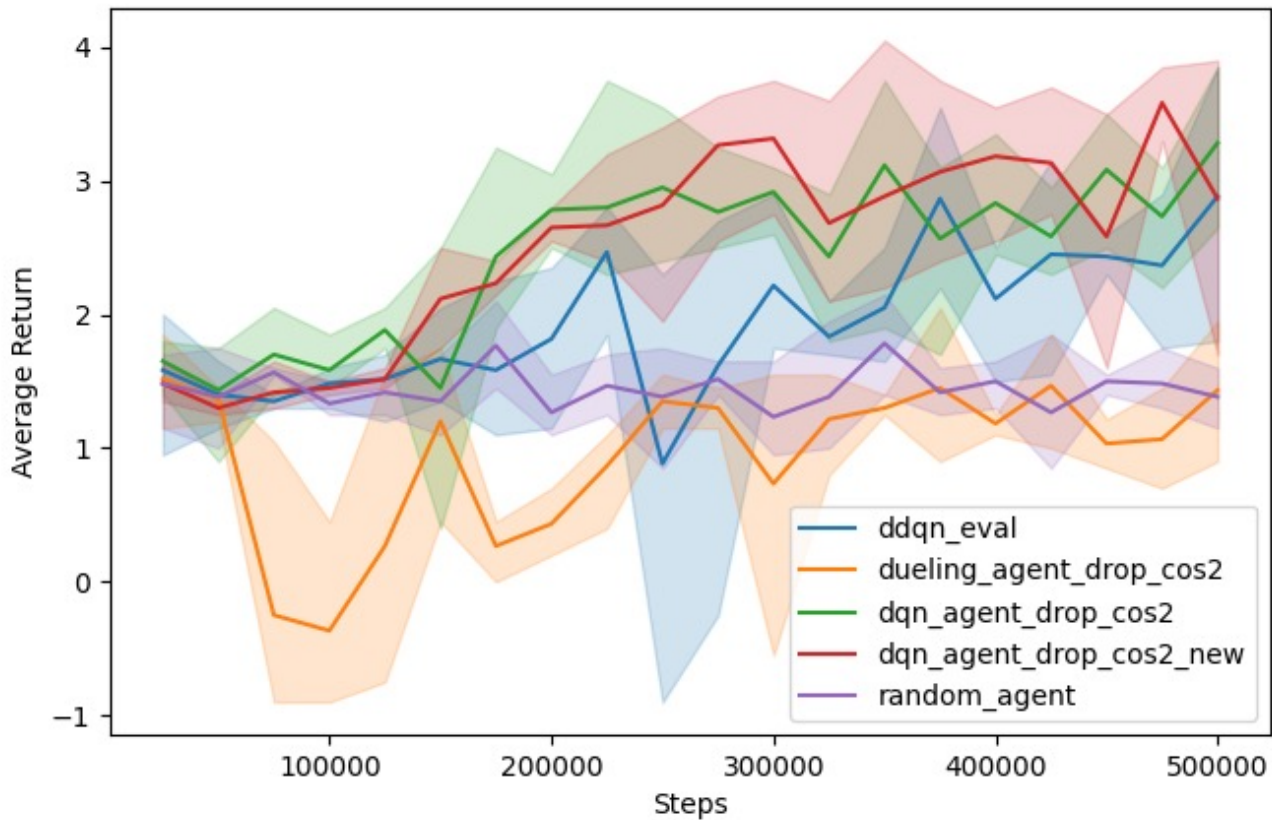


Source of inspiration for team name

# Munchausen

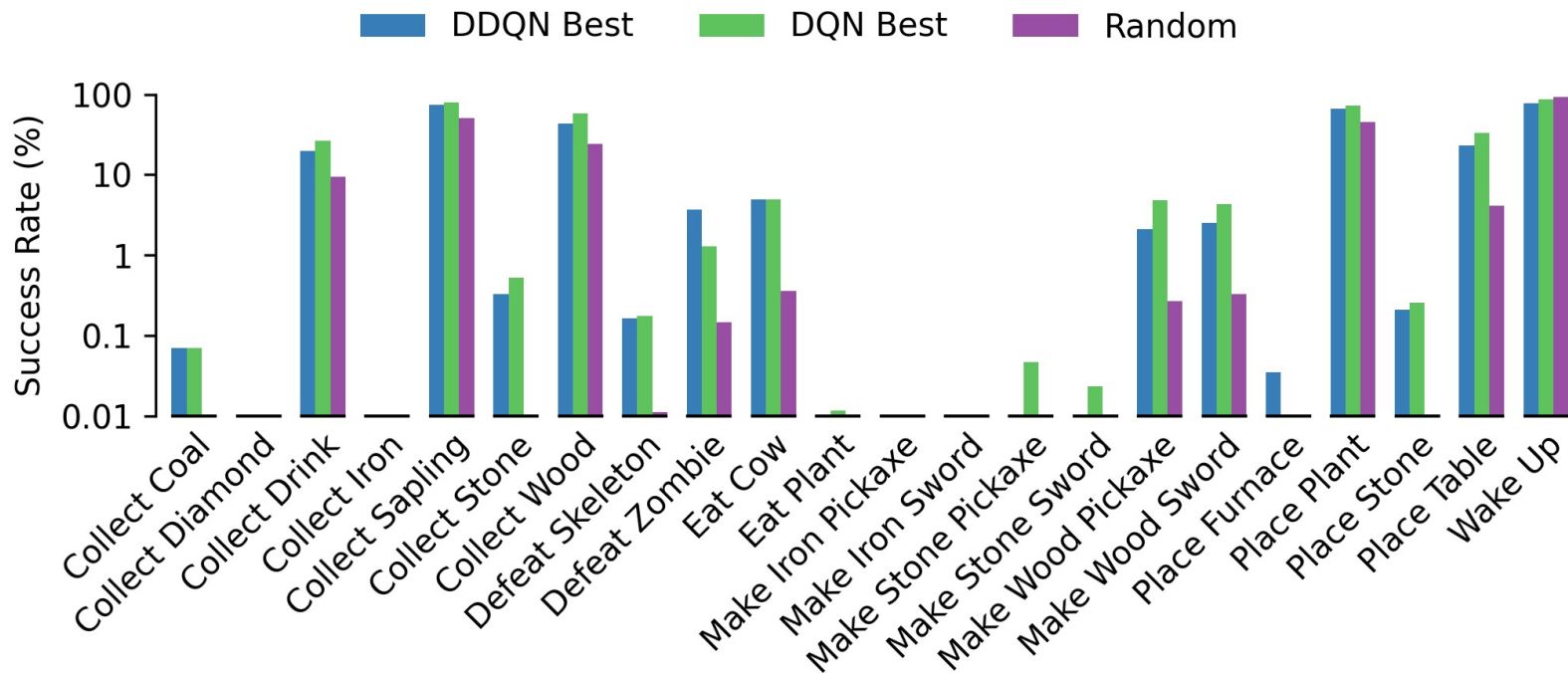


# Performace Comparison

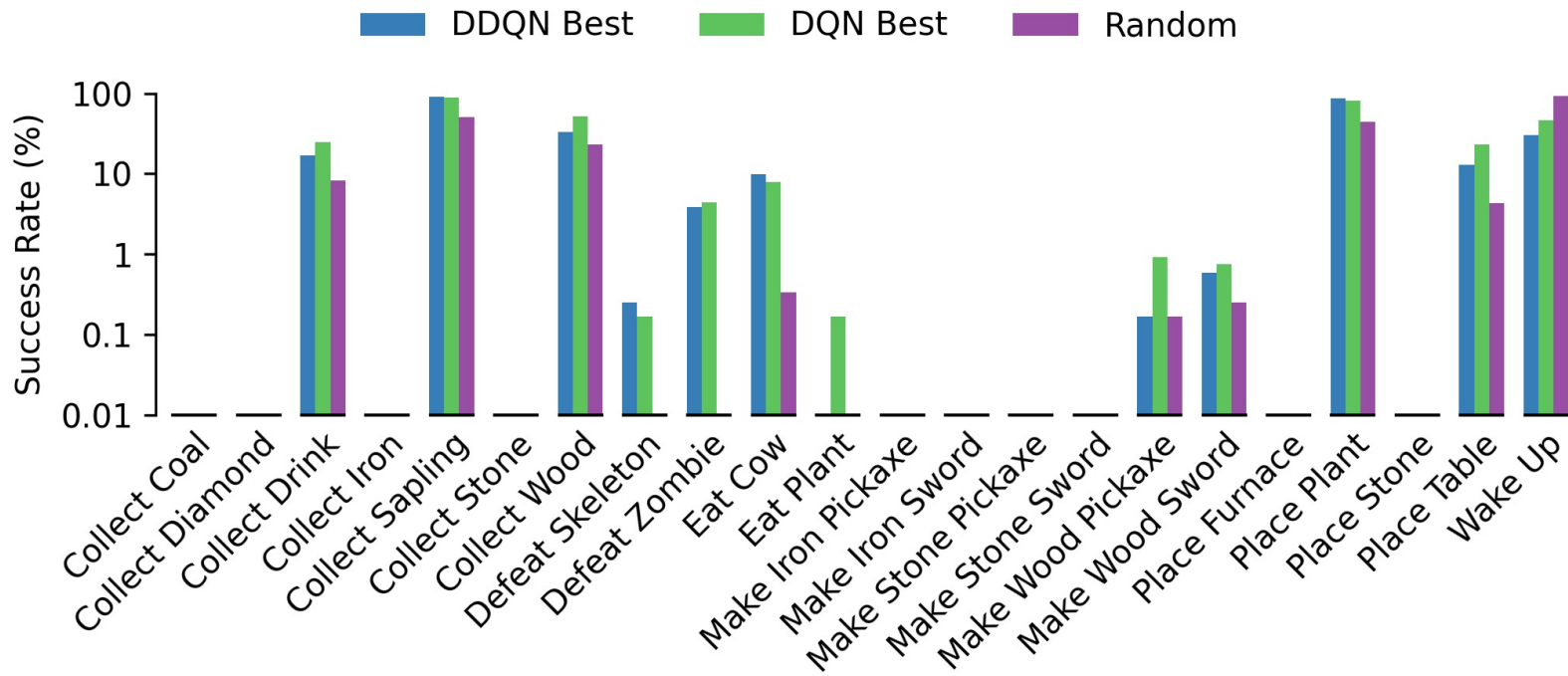




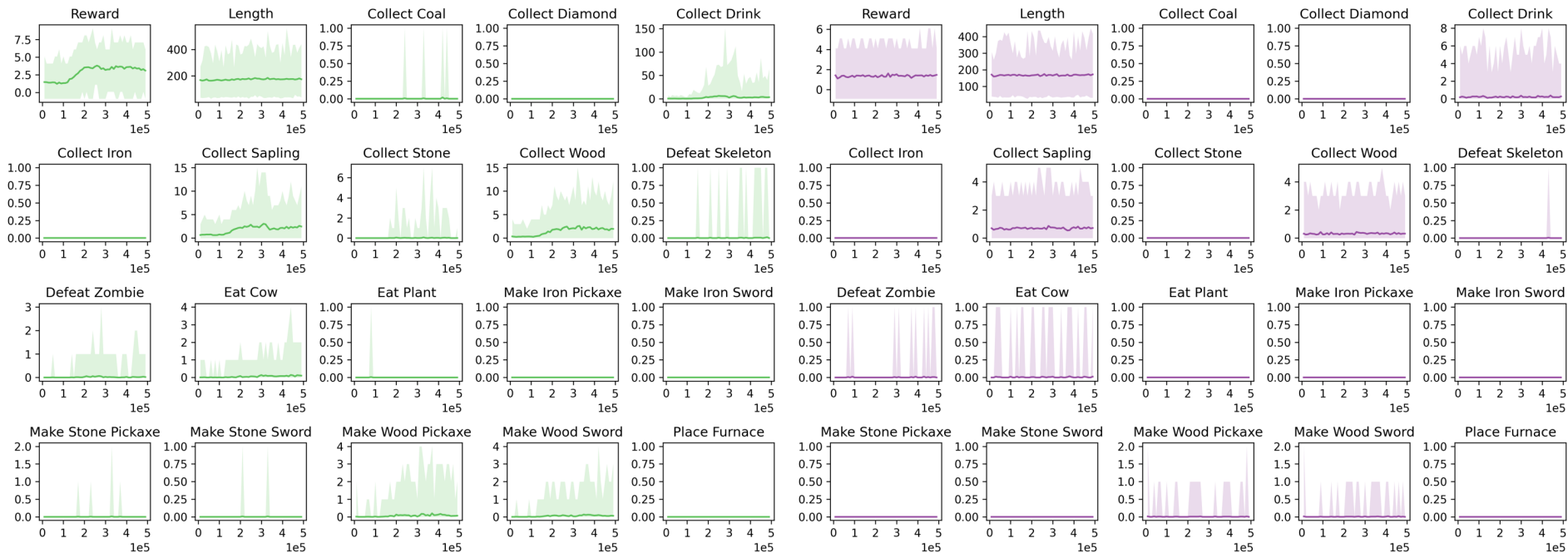
# Performance Comparison (2) - Train



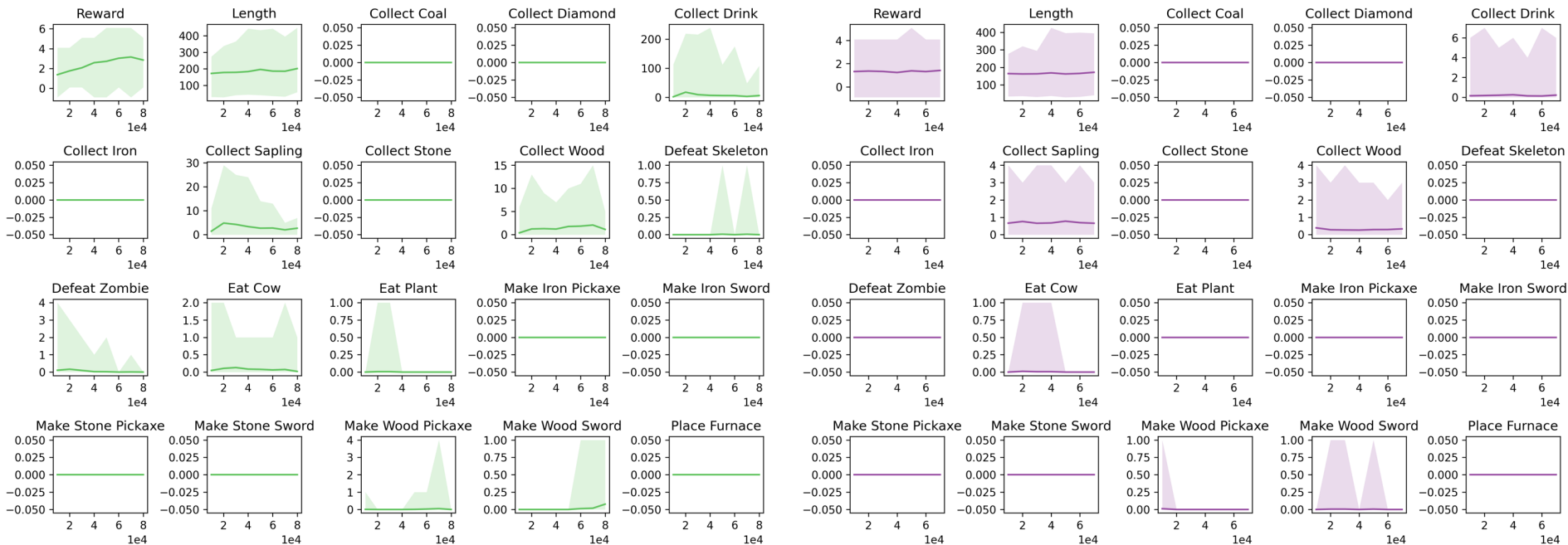
# Performace Comparison (3) - Eval



# Performace Comparison (4) - Train



# Performace Comparison (5) - Eval





# **Thank You**

Questions Please