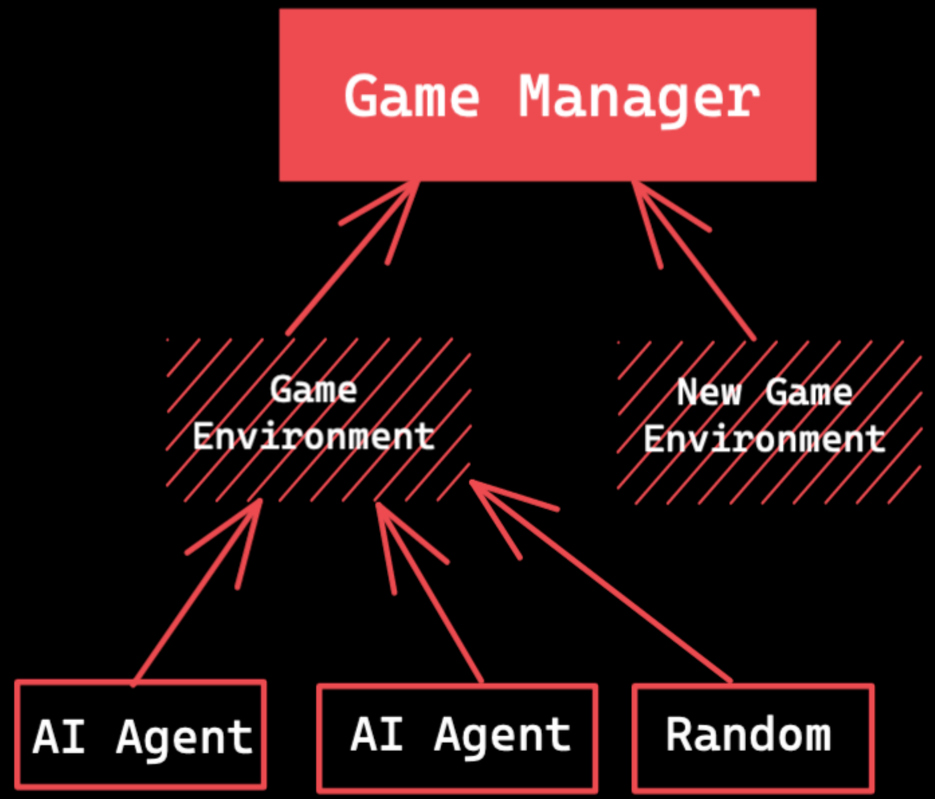
Deep Reinforcement Learning

Architecture

- **Game Manager**
  - Has access to a proxy game instance
  - Can change observation space
  - Can spawn new games
- **Game Environment**
  - Agents learn (or act) in here
- **AI Agent:** Learns to play the game



Deep Reinforcement Learning

Overview of DRL algorithms

- **Model Based:**
  - State transition probabilities are **known** (the game/environment is known)
  - Useful for single player games with entire game state known
  - “Plan” (or brute-force) the best possible action
- **Model Free:**
  - Rely on “learning”
  - Unbiased assumptions about environment
  - Accurate value or optimal policy functions are learned through trial and error