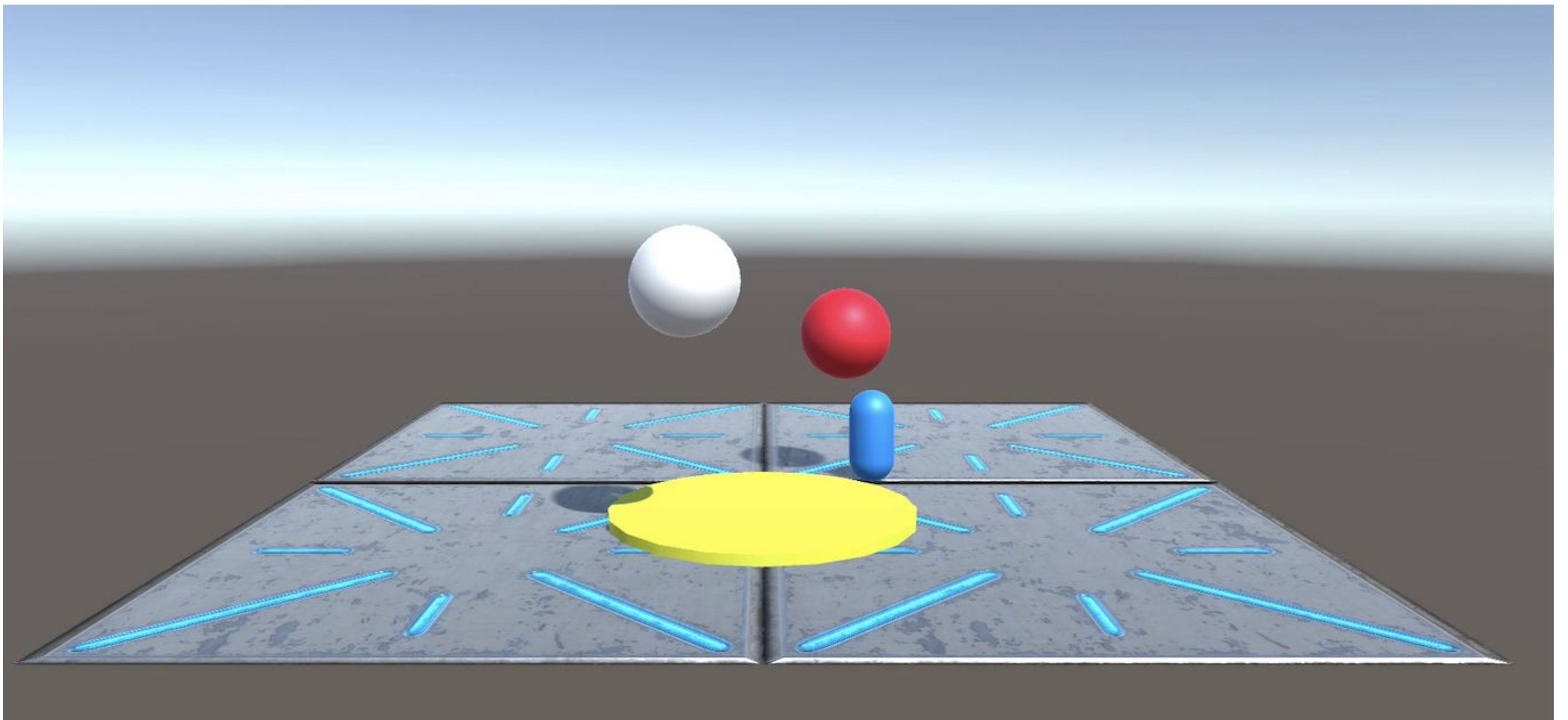


Learning Transferable Skills in Complex 3D Scenarios via Deep Reinforcement Learning

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Project Objectives:

Deep Reinforcement Learning uses a deep neural network to perform feature learning and feature engineering to maximize reward. It is time and computationally expensive particularly in Sparse Reward Environment where most actions has no positive rewards. Unfortunately, most real-world problems mirrors a Sparse Reward Environment, where sequence of precise actions are necessary in everyday task. Training an intelligent agent to perform a sequence of precise actions is difficult and the use of transfer learning to transfer relevant skills would shorten training time. As such, this project investigate methods to tackle a Sparse Reward Environment and application of transfer learning to scenarios using modern Deep Reinforcement Learning algorithms Proximal Policy Optimisation and Soft Actor Critic.

