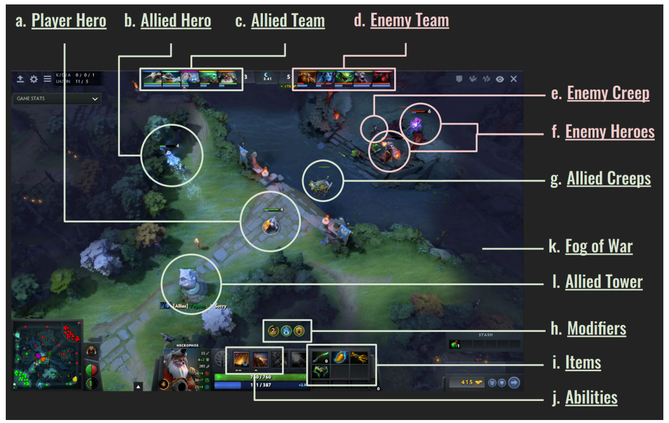
Learning Complex Skills Requires 100s of Millions of Frames!

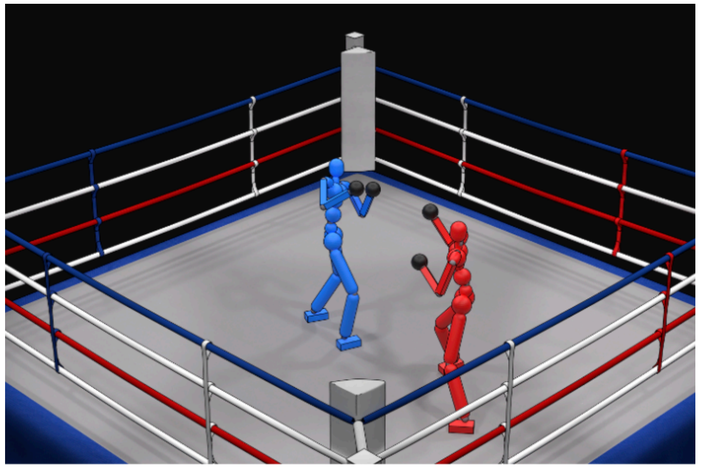
Gaming



Dota 2 with Large Scale Deep Reinforcement Learning

OpenAI, *
Christopher Berner, Greg Brockman, Brooke Chan, Vicki Cheung,
Przemysław "Psyho" Dębiak, Christy Dennison, David Farhi, Quirin Fischer,
Shariq Hashme, Chris Hesse, Rafal Józefowicz, Scott Gray, Catherine Olsson,
Jakub Pachocki, Michael Petrov, Henrique Pondé de Oliveira Pinto, Jonathan Raiman,
Tim Salimans, Jeremy Schlatter, Jonas Schneider, Szymon Sidor, Ilya Sutskever, Jie Tang,
Filip Wolski, Susan Zhang

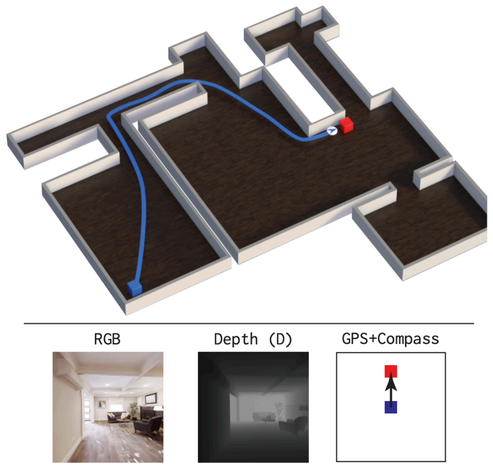
Animation



Control Strategies for Physically Simulated Characters Performing Two-player Competitive Sports

JUNGDAM WON, Facebook AI Research, USA
DEEPAK GOPINATH, Facebook AI Research, USA
JESSICA HODGINS, Facebook AI Research, USA

Robotics



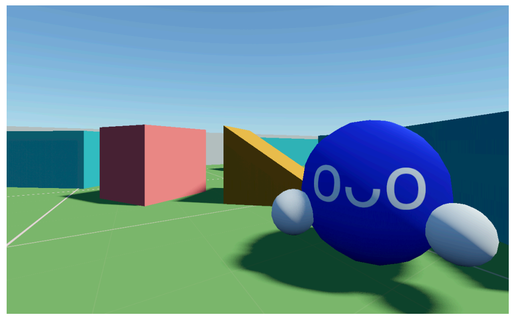
DD-PPO: Learning Near-Perfect PointGoal Navigators from 2.5 Billion Frames

Erik Wijmans[1,2]* **Abhishek Kadian**[2] **Ari Morcos**[2] **Stefan Lee**[1,3] **Irfan Essa**[1]
Devi Parikh[1,2] **Manolis Savva**[2,4] **Dhruv Batra**[1,2]
[1]Georgia Institute of Technology [2]Facebook AI Research
[3]Oregon State University [4]Simon Fraser University

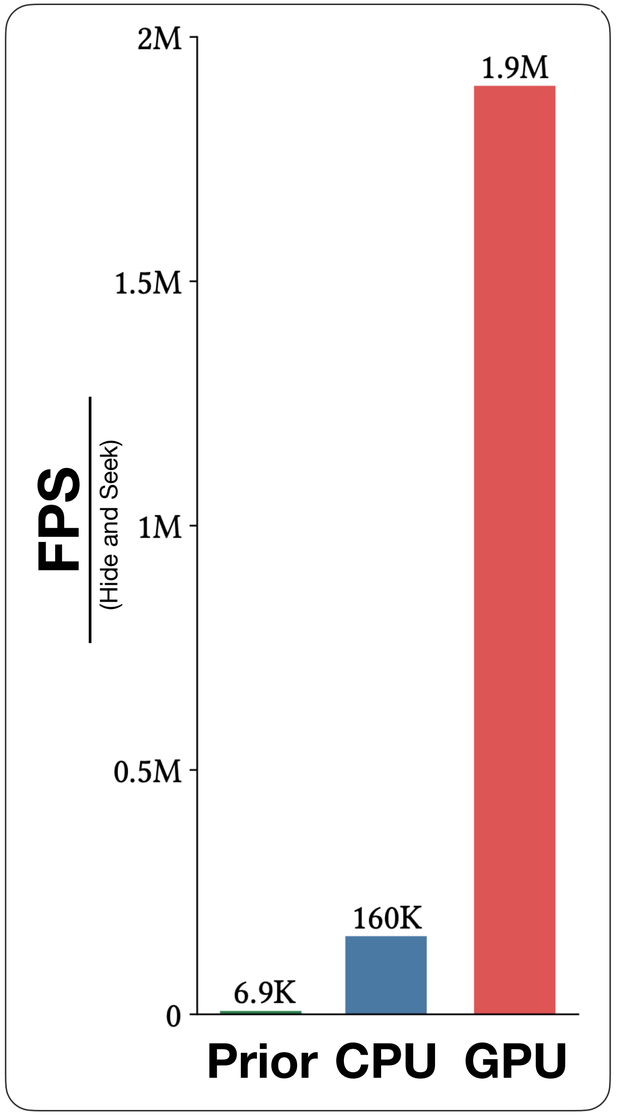
High Performance, Fully GPU Driven:

- **32000+** 3D Worlds
- **2 Million** FPS
- **1** RTX 4090

Flexible & Programmable Framework:



OpenAI Hide & Seek

Overcooked AI

(and more!)