BOT Chad

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BOT Chad 🔫 RAGE Liuxplay
BOT Chad 🔫 RAGE Pigey
BOT Chad 🔫 RAGE GTO

⭐ MVP BOT Chad for most eliminations

CS-GO RL Agent

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Domain understanding

Counter-Strike is a popular first-person shooter video game where two teams, terrorists and counter-terrorists, compete in objective-based missions, aiming to eliminate the opposing team or complete specific objectives, set in various real-world locations.

The game's strategic gameplay and focus on teamwork make it a competitive esports title with a dedicated global player base.

Goal Example

In the example is a game - Dota 2.

We want to recreate the same idea but for Counter strike game.

Goal

Training-partners for pro players

Learn from their strategies

Could replace a player that left, performance based on rank

goal 1: agent team beat highest rank team (5v5)

goal 2: agent team beat pro team (5v5)

Player   Bot

Research Questions

Main question:

- **How do we extract meaningful data from the game screen?**

Sub questions:

- **How can we extract the game screen? (screenshot/video time)**
- **What is a meaningful data?**
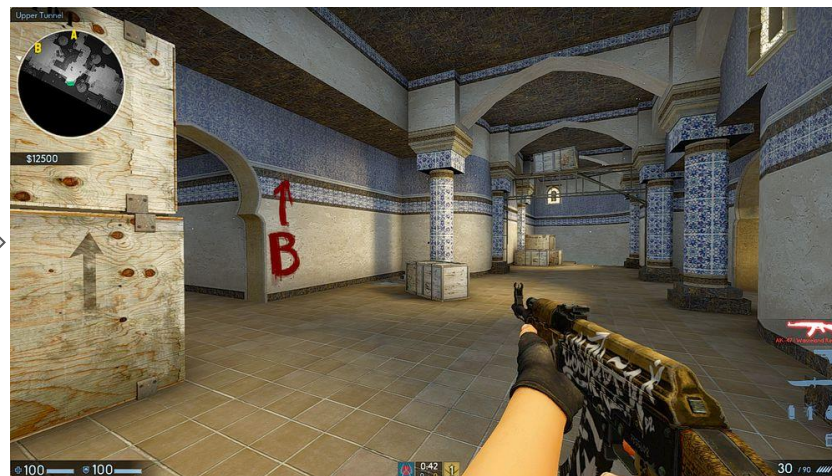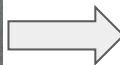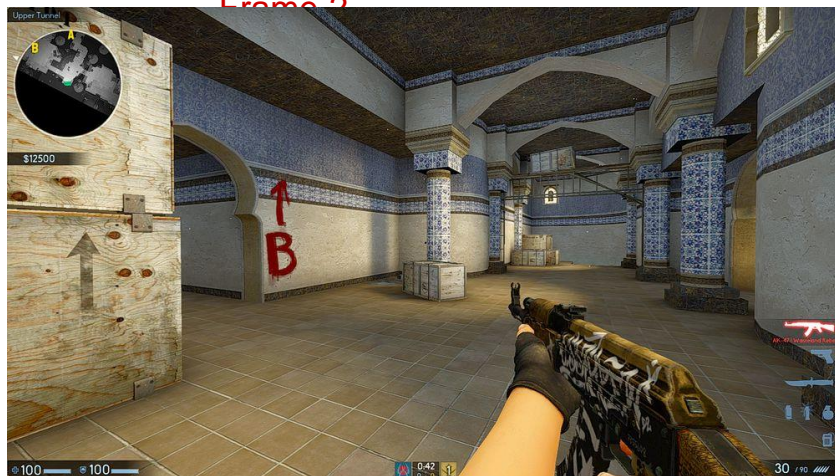- **How do we extract the meaningful data? (image recognition/object tracking)**

Data sources

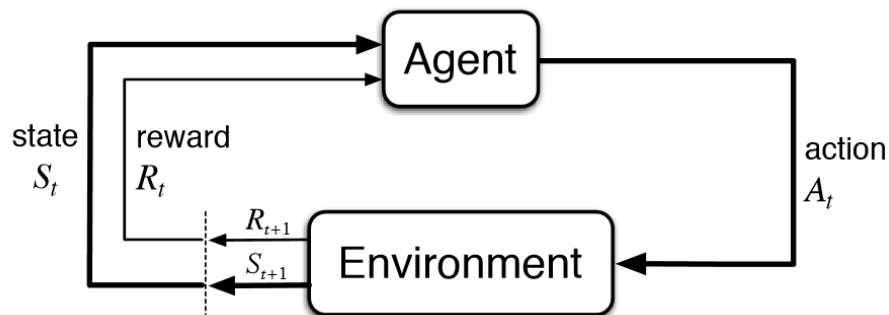The game screen tracking + sound

Frame 1

Frame 2

The Agent

Architecture

Policies

Algorithm

State 1

State 2

States, Actions, Rewards

Define States (just screen/filter screen)

Define Actions

Define Rewards

Training

Train against itself using multiple agents.

ideally 5 agents vs 5 agents, train as a team

goal 1: Make the Agent play until it can beat a team of 5 players of the highest rank

goal 2: Make the Agent play until it can beat a team of 5 pro-players
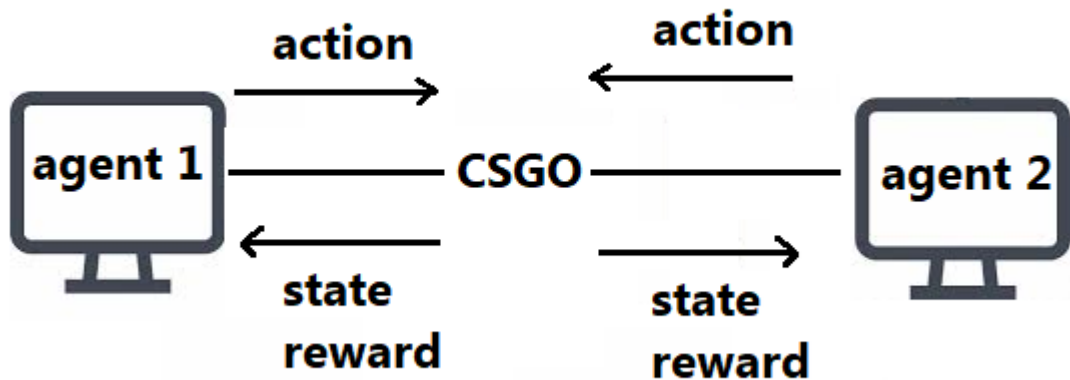
Bottlenecks

States

Actions

Rewards

Exploration Rate

Slow Training (2pc)

Visualize results

Keep track of certain stats:

K/D/A

Aim Accuracy

Training Progress in the form of videos (1h, 10h, 100h)

Ethical Factors

Game equality (in case someone leaves)

What if a player left on purpose because they are too bad?

Can it affect the game mechanics? (AI is good at finding bugs or unintentional mechanics of the game)