

Tank War API Documentation

Introduction:

Tank War offers a unique experience to players by allowing them to pick up in-game items, change their custom look, fight with escalating AI opponents, and develop different strategies against different levels.

Tank War integrates a variety of game APIs to provide graphical, audio, and operational support to enrich the player experience.

Python API:

PyTorch:

PyTorch is an optimized tensor library for deep learning using GPUs and CPUs.

All models inherit from this class, which supports model parameter initialization, gradient calculation, and model learning.

In game, PyTorch can move the tank left and right, aim and shoot at the player's tank, and even shoot at the player's tank from behind cover.

Pyqt5:

Used for UI production, all visible elements (forms, buttons, input fields, keyboard responses, tanks, maps) are drawn based on it.

Soundfile:

Read audio file.

Pyaudio:

Play Audio

Numpy:

Processing graphics data, the in-game function is to judge bullet collisions.

Opencv2:

Preprocess images used in the game, such as scaling, rotation, transparency.

Random:

Random number generation, training reinforcement learning requires some random exploration, training data generation also requires random, and random Power-up generation.