

User Manual

1. Introduction

1.1 Purpose – This document describes how the game Venom was developed and the contributions of our group.

1.2 Definitions, Acronyms or Abbreviations – Any definition, acronyms or abbreviations used in this document will be listed below.

2. Hardware Configuration

Below is described the hardware required to run our software.

1. CPU: Modern processor (Intel Core i5, AMD Ryzen 5, etc.)
2. RAM: at least 4GB
3. Graphics: Any integrated or dedicated graphics card that can support 2D rendering
4. Storage: at least 5GB

3. System Parameters

Describe any hardware/software parameters needed to be set in order to run the software system.

Below is the software that needs to be installed in order to run the code

1. Python
 - a. Pygame
 - b. Matplotlib
 - c. pytorch
2. IDE
 - a. Preferably Visual Studio Code (as the game was developed using this IDE)

4. Operation Procedure

Describe here how you can get your software to get running. Installation and how to use the software.

Installation

Ensure that the proper files are installed to properly run the software, both the snakegame.py need to be downloaded. As well ensure that pygame and matplotlib as well as another listed software is installed before trying to run our game.

How To Use

Hit run in the IDE to use our game. The game will continue to run until it is stopped manually, after being stopped the graph of its progress will be displayed.

5. Demonstration

Show your system in action.

a) Description.

In our project, inspired by the classic snake game, the snake navigates within a grid, growing longer by consuming objects and failing upon collision with walls or itself. Our objective is to employ the deep Q-learning algorithm from reinforcement learning to train the snake to achieve progressively higher scores in the game.

b) Screen Dumps.





