TRON User Manual

# What is TRON?

TRON (or light cycles) is a game of pursuit and evasion played on a computer screen. It appeared on the movie TRON in 1982, and in the 2008 remake of TRON: Legacy. TRON was chosen as a domain to investigate machine learning because it is a simple one, yet presents several features that are known difficulties within this aspect. This emphasizes a very dynamic, real-time environment where a perfect strategy is not known exists within the game, making it a challenging one for players through networking and individually against the AI. Human and machine intelligence can show their particular weaknesses and strengths chasing each other in this competitive arena.

# How do I start?

1. Run the TronMain.java class.
2. Select one of the three play modes:
   1. local: This is where you simply play with an AI (between 0 - 3). Choose 0 if you do not want to play a game but simply want to test out movement and other small mechanics. The game starts to lag around 3 AI’s so its always a tradeoff.
   2. advanced: This is the manual implementation of the networking aspect of the game where players are prompted to input network information into the console before they begin a game
   3. default: If inputting the network information every time is tedious then the user can directly modify the code and run the default networking specifications every time
3. Fill in the requested information if needed.
4. Begin the game.

# How do I play?

Try to force your opponent to lose the game by creating boundaries with your cycle and utilizing the boundaries while simultaneously avoiding crashing into these obstacles yourself. The game ends the moment one of the players hits a boundary or a wall. Score is calculated by how many times another player hits your wall. In order to make the gaming more interesting if a player crashes into themselves or the wall, you are still awarded points if you are the last external player they hit.

# Play Modes:

* Local:
  + 1-3 CPU-controlled players vs a human TRON player. Once you start the game, you enter how many CPU TRON Players you would like to play against. After this is done, you will see the applet open up with scores for each and yourself.
* Advanced:
  + Type in info on spot:
    - player number
    - local port number
    - remote port number
    - remote IP Address
  + This is a specific networking mode where you state which computer you are trying to connect to; choosing your opponent.
* Default:
  + Randomized networking where you are paired up with another player seeking an opponent.

## Controls:

* Up, Left, Right, Down Arrows: Direction Keys to determine the direction the Cycle
* Console input: Select game mode