**The Maze Runners**

* Platform: PlayStation (PS4)
  + First person/Third person/Upside down camera
* Random Generated Mazes
  + Size of the maze
    - Multiple Sizes based on the Level
    - Start from smaller to bigger
  + Difficulty of the maze
    - Based on the level of the player
    - Smaller mazes to bigger and more complex mazes
    - Less AI complexity to more AI complexity
    - Less enemies to more enemies
    - Easier enemies to harder enemies
  + Start point of AI and player
    - Same start point/Different start point
  + Exit door needs a key
    - Two keys, one for each player
  + Keys positions
    - Random
    - Not near start point(s)
    - Not near exit point
    - Same distance
* Player
  + Attack enemies
    - With shooting
    - With melee
    - Has cool down
  + Slow down the AI
    - With shooting
    - With melee
    - Has cool down
  + Block a way temporarily
    - With planting a wall
    - Has cool down
* AI
  + Learn to play like a player
    - ML agent learning in a lot of random mazes
    - Use two AIs to learn how to slow down the actual player
  + Path finding
  + Attack enemies
    - With shooting
    - With melee
    - Has cool down
  + Avoid Enemies
  + Slow down the player
    - With shooting
    - With melee
    - Has cool down
  + Block a way temporarily
    - With planting a wall
    - Has cool down
  + Find a key
  + Get to exit door
  + Remember the path to exit door (if visited before finding the key)\*

References:

[What's a good algorithm to generate a maze? - Stack Overflow](https://stackoverflow.com/questions/38502/whats-a-good-algorithm-to-generate-a-maze)

[Maze generation algorithm - Wikipedia](https://en.wikipedia.org/wiki/Maze_generation_algorithm#:~:text=%20Randomized%20Prim%27s%20algorithm%20%201%20Start%20with,the%20cell%20to%20the%20wall%20list.%20More%20)

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