**Structura documentatie licenta**

1 Introducere

- motivatie

- comportament

2 Aplicatii similare

* intro why ml in videogames-
* DeepLearning-
  + AlphaGo & AlphaGoZero-
  + Starcraft: Alphastar-
  + dota2: open AI-
* Computer vision-based -
  + Pong-
  + Doom-
* Procedural content generation -
  + Galactic Arms Race-

3 Implementare

* Adversary AI-
  + K-means clustering algorithm-
    - K-means expenation-
    - Vision radius-
    - Point saving-
    - Point loading
    - Clusterising
    - NavGoal
    - Problems and solutions:
      * …
      * …
  + A star algorithm;
    - Building the graph as is searches
    - Cheching for walls
    - Stoping condition
  + Movement
    - Player input
    - Get new coordinates
    - Collision
      * Wall/player/adversary detection
* The player character
  + Movement
  + Collision
    - Wall
* The environment
  + Tilemap
  + Sprites

4 Manual de utilizare:

* Play mode
  + Arrow keys to move
  + Go to the goal
  + Avoid AI
* Developer Mode
  + Display (D)
  + Set cluster number (field)

4 Concluzie

* Machine learning help create better AI for competitive players
* Adaptive difficulty for different players
* Future goals
  + Extend to multiple AI agents working together