**1 Motivation**

MOBA[1], short for multiplayer online battle arena, as a type of games, is becoming known to every household during these years. One of the most famous MOBA game so called Dota2 yields for a 30 million $ price tool[2] in TI9(its yearly hold international matches). Such grand occasion creates chances for the field of information technology. It is meaningful to apply big data techniques so as to analyze the game performance. After analysis, AI can coach its users how to make critical decisions that can help them take the game.

Critical decisions is considered more related with the character’s pick and its item builds which can be coached before the game has started. Indeed, there are strategies to be made during the game. They will possibly be added into the project in the future.

In TI9, there are already analyzers of a couple of teams devote in AI coaches resulting positively. However, application for analyzers are always more complex and professional. For the vast of players of the game, a more delicate application is more appropriate.

**2 Tasks**

Taking into account the hardship of building an embedded system, an independent application based on web technology is considered quick for users to start with. First of all, the website should be able to display the big data for its users, showing the pick rate and win rate of certain characters and its combat performance as well. For reference, another website satisfying similar functions is op.gg[3] which display the static data of League of Legends.

However, unlike League of Legends, it is more likely in Dota2 that there are no weak character but wrong choices in certain combat. Therefore, static data is not enough to help team win. An AI coach is needed in simulating a certain combat.

After users inputting the characters’ picks of other players, the AI coach can provide a help tips of the winningest picking. After two teams finishing the picking, the AI coach can provide a prediction of win rate for both and a general suggestion of item builds.

1. Static data of certain characters
2. Help tips of characters picking during combat
3. Prediction of win rate and suggestion of item builds
4. Friendly website design

In order to fulfill these tasks, this paragraph will focus on talking of the methodology used in this project. First of all, it is vital to build up a reliable AI system based on Machine Learning technology. Original data should be found and integrated into a certain form to be analyzed. Then, characteristics are defined and input into the system. Applying several models should be available for training the AI system to learn about the pattern. After a few tests, the feasibility of the system will be insured. In the end, it is utilized on a web-based application for users to get the useful knowledge quickly and easily.

**3 Significance**

There is a lack of the information transfer in Dota2 community. Players like the developer find difficulties in tracking the strategy of the game. Such project can teach those who are new to the game to find the right way of playing. From the perspective of humanities, it helps for the rookies to dig into the game and also purifies the game environment for the veterans. From the perspective of techniques, it is a creative combination of information technology and MOBA games especially for the vast of the players.

**4 Reference**

[1]: <https://en.wikipedia.org/wiki/Multiplayer_online_battle_arena>

[2]: <https://dota2.prizetrac.kr/>

[3]: <https://na.op.gg/>