



TeamUJIDota2Bot

Team UJI's proposal for 2021 Dota2 competition

Bot name

TeamUJIDota2Bot

Affiliation

Institute of new imaging Technologies (www.init.uji.es)
Jaume I University
Castellón
Spain

Team members

Haroun Guechiri
Matthew M. Briggs
Diego Villabrille Seca
Marc Pitarch Dos Santos
Fernando Gramage Rodríguez
Andrés Llorens Angulo
Raúl Montoliu (www.raulmontoliu.com)

Corresponding author: Raúl Montoliu
Contact Email: montoliu@uji.es

Bot description

Heroes selection

For selecting the heroes, we have studied the heroes that (in the last three months) are in the top ranking in tower damage and have a good win rate (<https://www.dotabuff.com/>). We have tested the selected ones but it seems that no big advantage is obtained with respect to using the ones included in *BotExample.py*.

However, some of the original heroes have finally been changed, mainly to avoid fixing some bugs where they invoked a creep, and due to the framework's limitations, all heroes would stay static trying to follow said creep, until it vanished or died.

The heroes used in this version of the bot are the following:

- npc_dota_hero_axe
- npc_dota_hero_brewmaster
- npc_dota_hero_juggernaut
- npc_dota_hero_abyssal_underlord
- npc_dota_hero_troll_warlord

Lane occupation

We have decided to send **all heroes to the middle line** since the objective is to win as fast as possible and the AI algorithm of the game only places one hero in this lane. We trust in destroying the ancient Dire base faster than the enemy heroes on top and bottom lane take to arrive at our base.

Heroes behaviour

We have modified the AI behaviour included in the example bot. The example bot gives priority to attacking towers, then to attacking enemy units, but there is no difference between attacking creeps or heroes. We have **modified the priority**. In our bot, first the enemy hero is attacked if we are out of range of the enemy tower, then the enemy creeps and finally the tower. This is preferable since, when no enemy units are alive, all the still living allied units can attack the enemy tower.

At the beginning of the match, heroes use all the money buying passive items giving more health and improving attacking power. These items are item_gauntlets (x3) and

item_branches (x1). They also try to buy item_boots and item_broadsword as the game progresses. If the bot tries to buy an item but it already has 6, it will sell the item_branches and buy another item_broadsword.

Also, the heroes upgrade a random ability when it is possible. We have fixed an existing bug in the example code where the bot would not upgrade the ultimate ability and would freeze in place. The hero uses a random ability if it has a target and the ability is not in cooldown.

Finally, we have set the heroes to change their safepoint after destroying each tower, so as to not wait in allied towers for creep waves in late game, where most of the action happens in the enemy base.

Results

The proposed bot gets the victory in a time range of 23 to 26 minutes.

