



D3Genius

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1. What is exactly the function of your tool? That is, what will it do?

The purpose of the tool is to analyze the current Diablo III users, characters, heroes, and items information in the Diablo III online community, then provide proper recommendation to game players, including:

- Starters: have trouble in finding a proper character or hero that fits user's favor
- Intermediate players: have trouble in deciding the future of the character, e.g., skill points distribution, weapon choice, etc.
- Mature players: want to know deeper about the game and develop more efficient strategies in conquering opponents.

This tool can also be used by game analysts and developers to analyze user account activities and gain more insight to better reshape the game for future development.

2. Why would we need such a tool and who would you expect to use it and benefit from it?

Diablo III is one of the most popular games in present game market. There are over one million registered game players globally. However, because of its freshness, peripheral tools have not yet been maturely developed yet. Therefore, our tool will be the first existing Diablo III analysis and assistance tool to help game players to get started quickly and enjoy more from the game.

This tool is aimed to be beneficial for virtually all levels of players, game analysts, as well as game developers. For game players, the tool will assist them to get familiar with the system more quickly and make better decisions when facing difficult situations. For game analysts, the tool could help them gain better understanding of the current game trend as well as game users' tastes. For game developers, the tool could provide them a good platform to learn how to better balance the game and make future game more playable.

Therefore, this tool is of great potential benefit to not only game players, but also peripheral professions, and will be of great economical benefit.

3. Does this kind of tools already exist? If similar tools exist, how is your tool different from them? Would people care about the difference? How hard is it to build such a tool? What is

the challenge?

---Not yet. But similar tools do exist, such as a recommender for the World of Warcraft (WoW). Our tool aims to provide clustering and recommendation based on the official Diablo 3 Web API. To build such a tool, we will face the following challenges:

- (1) Parse user data extracted with Diablo 3 Web API
- (2) Determine valuable recommendation parameters, such as career-based recommendation, equipment-based recommendation, etc.
- (3) Research to find out the appropriate classification algorithm for extracted data, such as nearest neighbor search algorithm, and recommendation algorithm, such as user-based collaborate filtering.

4. How do you plan to build it? You should mention the data you will use and the core algorithm that you will implement.

We plan to build: (1) a user-profile analyzer (2) hero-based analyzer (3) skill-item recommender. We will use a bunch of user's profile provided by *Battle.net* as the collection of data source. The core algorithm will be a vector-based cosine similarity and collaborative filtering.

5. What existing resources can you use?

The resource involves Diablo 3 Web API, from which we will obtain users' character profiles.

6. How will you demonstrate the usefulness of your tool?

There are two modes of the system, for new users and seasoned (intermediate and mature) users. For new users, we want to know your preference of the role (like magical/physical, witch/knight, defensive/offensive, etc.), and then do a recommendation of heroes as well as items for you based on similarities; for seasoned users, we want to know the heroes of your history playing, and do a collaborative filtering to recommend a new hero fits you most and with the related items. And, YOU (the user) decide whether it is useful.