Halo 5 and Xbox One Database

Project Description

CSE 530: Database Management Systems

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**Overview:**  
Using in-game statistics from Halo 5, an Xbox One game, and profile information for Xbox One players, create a database that will allow a user to find mutual friends to play with who have similar skills and also recommend games based on Halo 5 play style.  
  
**Data Sources:**  
Halo 5 player stats and match data.  
Xbox One player profile which includes a friends list and all Xbox One games played.  
The data sources above will be blended together based on the Xbox One Gamertag.  
  
**How to get our data:**  
The developers of Halo 5 have an API to access content within their Halo 5 database. The API allows a user to submit a player’s name or a unique match id and returns a JSON file with the data listed in it. We would need to request data on lots of players and strip out what useful information we need to put in our own database. Some of the data that we can use would be players matches, which include time played, whether they won or lost and how well they performed in the match. We will also grab a player’s overall statistics from their cumulative matches. In Halo 5, there are also several different game types that can be played online. We would grab all the different game types that a player has played (which are listed as Arena or Warzone) and determine more details about player preferences in Halo 5.

To get the Xbox One player information (like Facebook account information, but for the Xbox One), there are several existing open APIs available to request certain information about a player. Using a player’s Gamertag, the different APIs allow the user to pull information about the player, including profile name, location, a list of games the player has played, and a list of friends of the player. Once we have the data, which also comes in a JSON file format, we will have to take out the useful information and put it into our database.  
  
**What's the Purpose / Need / Uniqueness:**  
The purpose or need would be for anyone who plays Halo 5 to have a better way to find new friends to play with who match your play style. For example, some of my friends are too competitive for me so playing with them is not enjoyable because they compete against players who are much better than me. Also, playing by yourself is not as enjoyable. The database would use data from your friend's friends list to find new mutual friends. Also, from another data source, game recommendations could be made based on finding what games people play who have a similar Halo 5 play style.  
  
**Interface:**  
Using a basic Web Interface, the user would enter their Xbox One Gamertag (or any Gamertag that is currently in our database) and specify what kind of friend recommendations they want or if they want game recommendations. For friend recommendations, we would allow the user to specify how many layers of mutual friends to search through and specify game modes that you want to play (Halo 5 has several different types of game modes). Another search criteria that we would consider is checking what times the player plays the game to see if it’s similar to any mutual friends. The other major set of information our database can pull for the user is game recommendations. Using the games played and friends list pull from the Xbox API’s, we can compare those lists to a player’s Halo 5 statistics and recommend games for the user to consider playing.