**SI507 Final project proposal**

**Xia Yan (isaacyan)**

**Data Sources**

First, I will get the data of users on Steam by following the instructions from <https://steamcommunity.com/dev>. After browsing <https://developer.valvesoftware.com/wiki/Steam_Web_API>, I plan to use Steam developer to search users along with their profiles given their steam ID.

The project will be divided into two parts.

I will search a range of users by using the method “ISteamUser/GetPlayerSummaries/v0001” given by ids chosen randomly or input in the terminal. Then, I will integrate the search results into a json cache file. Then, their friends’ profiles can be found by searching the friendlist if the profile is public by using the method “ISteamUser/GetFriendList/v0001”. Also, if there is no related user or the related user chose to keep his profile private, it will show some error messages on the screen. The number of search results in total will be planned to be more than 1000 if possible in the whole process. The user-profile results using original ids and those using friend ids will be marked. If a user gives a id which has already been on the friendlist, it will be still marked as a id of third type which means that this is a mutual-friend id pair.

(From <https://github.com/Holek/steam-friends-countries>, we can transform location data in my file into a place that can be readable.)

The second part is to find the games a player owned. We will mainly search the gamelist of the users whose id is provided by the input. There is a method “IPlayerService/GetOwnedGames/v0001” that will return the game id and the play time. The game name can be obtained by scraping <https://store.steampowered.com/app/>.

**Data source challenge score**

|  |  |
| --- | --- |
| Data Source | Challenge Score |
| Web API you haven’t used before that requires API key or HTTP Basic authorization | 4 |
| Scraping a new single page | 4 |
| Multiple related CSV or JSON files with at least one file containing > 1000 records \* | 4 \* |

\*: the file size may be less than 1000 if the user only wants a few results.

Then total score will be 8 or 12, which will all >= 8.

**Presentation options**

The data will mainly contain two json files. The first one is a file with search results od user profiles. The following is the sample result format from an example provided by Steam itself <http://api.steampowered.com/ISteamUser/GetPlayerSummaries/v0001/?key=XXXXXXXXXXXXXXXXXXXXXXX&steamids=76561197960435530>:

{"response":{"players":{"player":[{

"steamid": "76561197960435530",

"communityvisibilitystate": 3,

"profilestate": 1,

"personaname": "Robin",

"lastlogoff": 1541610301,

"profileurl": "https://steamcommunity.com/id/robinwalker/",

"avatar": "https://steamcdn-a.akamaihd.net/steamcommunity/public/images/avatars/f1/f1dd60a188883caf82d0cbfccfe6aba0af1732d4.jpg",

"avatarmedium": "https://steamcdn-a.akamaihd.net/steamcommunity/public/images/avatars/f1/f1dd60a188883caf82d0cbfccfe6aba0af1732d4\_medium.jpg",

"avatarfull": "https://steamcdn-a.akamaihd.net/steamcommunity/public/images/avatars/f1/f1dd60a188883caf82d0cbfccfe6aba0af1732d4\_full.jpg",

"personastate": 0,

"realname": "Robin Walker",

"primaryclanid": "103582791429521412",

"timecreated": 1063407589,

"personastateflags": 0,

"loccountrycode": "US",

"locstatecode": "WA",

"loccityid": 3961

} ]}}}

along with its friendlist added into the tuple:

<http://api.steampowered.com/ISteamUser/GetFriendList/v0001/?key=XXXXXXXXXXXXXXXXXXXXXXX&steamid=76561197960435530&relationship=friend>:

(see in the attached file friendlist.json) and marked as original ids. Then, the friend id will get further result and integrated into the file and marked as friend ids.

The second one will be a file contains the gamelist. The sample file provided by Steam can be seen in the attached file gamelist.json on <http://api.steampowered.com/IPlayerService/GetOwnedGames/v0001/?key=XXXXXXXXXXXXXXXXXXXXXXXA&steamid=76561197960434622&format=json>. The data will be modified by adding a key of the user id and some content such as the game name through the website <https://store.steampowered.com/app/>.

The main presentation focus of the user will be on the "loccountrycode": "US", "locstatecode": "WA", "loccityid": 3961. It will be the location and can be transformed into the place name from <https://github.com/Holek/steam-friends-countries>. The main presentation focus of the game will be the game name and the game played time.

**Presentation tools**

1. Plot a world map. On the map shows the number of users in the database in a country.
2. Select a user. Plot all the locations of his friends on the map.
3. Visually show all the game listed in the database along with the number of players and the total playtime.
4. Visually build a database and show the relationship between the games and the players.