ORIE4741 Project Proposal:
Advice for players to improve their game experience in a LOL match.

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1   Dataset Description

The dataset is collected from Kaggle which is related to all the in-game data of League of Legends video game. The dataset consists of 184070 ranked solo games, spanning across several years. It contains 20 columns: unique id for each player; win or lose are labeled as 0 and 1; items from 1 to 6 which represents the serial number of each item for 6 positions; trinket represents the serial number of different trinkets; kills, deaths and assists are represented by numbers; largestkillingspree, largestmultikill, killingsprees and longesttimespentliving are in-game terminologies which are counted and represented by integers; doublekill, triplekill, quadrakill and pentakill are in-game terminologies which are counted and represented in binary, ie. 0 and 1.

2   Questions

The final purpose of this game is to be a winner, yet also there are players only interested in killing, getting the most money or having the best items. For these reasons, the analysis will not only focused on which elements will affect the result of the game, but also some other things that may affect the players' game experience. Specifically, the following questions are proposed:

- What elements(items/trinket/kills/deaths/assists etc) in each game for a team will affect the result of the game?

- For these players who like to make kills, what elements may make them acquire pentakills(kill all five opponents in a fight or quadrakills for 4) in a game?

- Will the players' performance on kills and deaths indirectly affect what items they will have till the last minute of the game?

- For players who hate to die in the game, what items can support them for having the longest time spent alive?

3   Why the problems are important

From Wikipedia, League of Legends was released in 2009 and has since grown in popularity. By 2012, it became the most played PC game in North America and Europe in terms of the number of hours played. Many of the students are still playing League of Legends by now. Our analysis may solve the biggest problem that League of Legend players may concern: How to win the game? By using big messy data processing and analysis, players may know items with the highest win ratio and may also know how the trinket plays an essential role. There is more science behind shaping player behavior – avoiding unreasonable group fights, the best places to place the wards and the order of building items. Players may win the game easily by playing scientifically and efficiently. In the end, this project will help players improve their win ratio and also save their time so they can go to study after the games as soon as possible.