CSE 482 Project Proposal

Project Title: League of Legends Win Predictor

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Project Proposal

League of Legends is one of the most played computer games in the world, with millions of people playing the game. Because of this, there are very large amounts of data for the game, and the company that makes the game, Riot Games, provides an API for the data. There is also an API for static data, and these two APIs will be the only data sources used for the project. Below are links to both of them. There shouldn’t be much preprocessing needed however I plan to filter the data based on who is in the game.

Riot Games API: <https://developer.riotgames.com/api/methods>

Static Data API: <https://developer.riotgames.com/docs/static-data>

I think a short description of the game is needed to understand my idea for the project. A game of League of Legends is between two teams of five players, and takes on average around 30 minutes. The goal is to destroy the other teams base, but you also kill the other team to get ahead of them. There are over 100 different characters that players can choose to play each game, so the games are always different. The game is played on a map with three main sections, so players on each team that are in the same section will fight each other more. The game is very complicated, and there is a lot of variability from game to game, meaning there is a lot of data to analyze. There are also millions of games played a game, so the amount of data is very large.

My proposal is to use predictive modeling to predict which team will win the game. My idea is to first look at how good each player is. In League, every player has a rank that is supposed to show how good they are, this would be one factor in determining which team will win. I also plan on using the API to look at each players’ past games, to see if they are good with the character they are playing in the current game or good with similar champions. I would also look at all of the data and see how the how the characters they picked preformed for everyone. Looking at win rates, Kill-Death-Assist ratios, and how the characters performed head to head will be a big part of my analysis.

The main goal of my project is to make a predictive model that is correct significantly more than 50 percent of the time. I say this because guessing randomly who will win would be right 50% of the time. However, there are a lot of factors, and it is impossible to know everyone about the players based on the API, so I don’t expect my model to be right every time. It is hard to have a goal for a specific rate of correct predictions, but I would like to get it over 75%. Since I am the only team member, I will do all the work.

Project Timeline:

March 3rd: Understand how API works and can pull data for each player, and data for the characters they are playing.

March 27th: Finished all code for collecting data from the API, starting analyzing it to predict a winner.

April 17th: Finish code that looks at data and predicts who will win.

April 26th: Finish the project and project report, turn in to professor.