Sports Gambling

Team J.A.T.T.

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The Importance of Data in Sports Gambling

Fantasy sports, sports betting, and the entirety of the sports gambling industry has become one of the fastest growing marketplaces in the country. People are enjoying the legalization and rise of sports gambling across states everywhere and the national media attention given to the industry has substantially increased over the last few years making it more mainstream than ever before. The growth in sports gambling creates a necessity for sports data applications that can help the sports gamblers make better informed wagers.

Sports betting at its core is simply taking a chance knowing that the outcome could go one of many different ways, but similar to the stock market, if one knows where to look, that person can identify trends and variables that lead to a trade or investment that has a better probability of success based on data analysis. Historical statistics, measurements, and ratings about a player or team can tell a story and in some cases be very eye-opening. All of this data is critical knowledge that sports gamblers can utilize to help them achieve the most winnings. Our vision pertains to creating an app that will help this new market of sports gamblers make more intelligent wagers by centralizing all the relevant data and filtering it in a user friendly display so that they can bring home the big bucks when it comes to sports fantasy and betting.

Data Sets from the NBA and Trends They Expose

Our data sets consist of NBA player and team statistics from every season dating back to 2000. The data comes from stat recorders who work at every single professional event marking down everything that happens and then publishing it. The NBA owned and withheld the data for its league until they opened it up for public use to fans back in 2013. The data is about player and team statistics that consists of points, rebounds, field goal percentage, and all the other standard quantifiable basketball data. There is a solid amount of basketball statistical data out there on the internet like Nba.com/stats and Kaggle.com.

Player	GP	Min	Pts	FGM	FGA	FG%	3PM	3PA	3P%	FTM	FTA
Ben Simmons	45	37.1	35.7	10.3	23.6	43.6	4.7	13.0	36.0	10.5	12.1
James Harden	46	30.7	30.0	11.1	20.1	55.1	1.6	5.0	31.6	6.3	10.4

Some questions we will answer include: Who is most likely to win the MVP in the league? Should a person take the over or under for the number of 3-pointers made in a game? What is the likelihood that LeBron James has at least 6 assists in tonight's game. These questions are common bets that sports gamblers have to make a decision on all the time. There are resources available that will give you a percentage on the odds for these types of bets, but not actually show you the data that got them to that conclusion themselves.

Target Audience and Usage of the Application

The main users of our application will consist of sports fans in general. The professions of these users do not have any limit. Sports gambling participants can range across all sorts of professions. These sports gamblers will have fluency about sports in general and so they will have prior knowledge of the various categories of statistics. They will want to use our project to filter the large amount of data based on what they are looking for and either formulate their own speculations based on the raw data or in some cases have the application give them a reasonable forecast for a particular stat.

The functionality of the application will be simple. The user will pick a league, filter by team or a specific player, then select all of the stats they want the app to display for a given period of time. They can then compare these results side by side with another team or another player. Another feature will be the user requesting a forecast or prediction based on a specific stat category and time frame that the application will show back to the user. For example, a user selects Stephen Curry as the player and free throws made as the category. Next, the user specifies the next game versus the rest of the season, and our application will produce a prediction of how many free throws made Stephen Curry will have for either the next game, or by the end of the season. These two time frames are most relevant when it comes to gambling propositions.

Team J.A.T.T.

James Mitchell is a Senior computer science major at James Madison University. He has worked on developing back-ends in Ruby on Rails within JMU's Physics/Chemistry IT department, as well as VR applications for JMU's Center for Global Engagement. He enjoys taking on new challenges and is a quick learner when it comes to understanding new languages, frameworks, and technologies.

Adrian Brazell is a Senior CS and Biology double major at JMU. He has taken advanced courses in systems and cryptography for CS. He also has been conducting research for the department of biology and has developed an video acquisition as well as data analysis software for

said research. Adrian is a creative and fast learner and is excited to put these skills to the test in developing a database system.

Tate Steinour is a Senior in the CS program at JMU and has taken all of the required courses for the program along with electives in Cryptography, Information Security, and Cyber Defense. He worked an internship the previous summer doing software development. He did back-end work in Java and dabbled around with an Oracle Database using PL/SQL. Tate is always excited to work on new projects and will always give full effort and commitment to the job.

Tinh Tran is a Senior CS major at JMU and has taken all the CS required courses plus many additional electives courses in areas such as InfoSec and Algorithms. He has decent working knowledge of Python and even more so for Java, two languages that are often used in conjunction with SQL for database applications. He is new to yet very eager to learn about the database science aspect of CS that would broaden his horizon on the discipline.