

Story of EPL Teams Leicester's Road to Glory and becoming the Premier League Champion

Submission By: Akshay Tambe (apt321), Ashish Jain (aj2429), Lakshay Sharma (ls4618)

Project Goal:

To extract EPL match statistics over all seasons, perform descriptive analysis and express them through vivid and elusive data visualization techniques.

We aim to visualize that which were the top teams in every given EPL season, where did a given team stand as compared to others in given EPL seasons and how did they progress eventually with every season. We are also focused on determining which are the teams which were eliminated in a given EPL season and which were promoted to EPL from Division 1 for the next season. In the end, we also want to determine which was the most dominant EPL team in the given tenure.

Data Set:

Source: <http://football-data.co.uk/englandm.php>

Dataset in usage:

1. Premier League Dataset
2. Division League Dataset

This data has the following features:

| Attribute | Description | Range and Values | Data Type | Attribute Type |
|-----------|---|---|--------------|----------------|
| Div | Division Level of the Match | E0: EPL E1: Division League 1 | Char /String | Categorical |
| Date | Date of the Match Played | 14/08/93 to Present | Char/String | Temporal |
| HomeTeam | Name of the Home Team | Name of the 20 Teams playing league during the season | Char/String | Categorical |
| AwayTeam | Name of the Opposing Away Team | Name of the 20 Teams playing league during the season | Char/String | Categorical |
| FTHG | Total goals at Full-Time by the Home Team | 0 to max goals | Numerical | Quantitative |
| FTAG | Total goals at Full-Time by the Away Team | 0 to max goals | Numerical | Quantitative |
| FTR | Type of the Winning Team (Home/Away) | H: Home, A: Away | Numerical | Categorical |

Analytical Questions and Proxy Tasks:

1. What is the position of a given team during the given season?

Proxy Tasks:

1. What are the total points scored by a given team in a given season?
2. What is the position of a given team as compared to other teams in a given season?

2. What is the total number of goals scored by a given team in the home and away matches? How many of them did they scored against a particular opponent over a season?

Proxy Tasks:

1. What are the total goals scored by a given team in a given season in home matches?
2. What are the total goals scored by a given team in a given season in away matches?
3. What are the total goals scored by a given team against every other opponent played in that given season?

3. Which team were relegated and promoted from EPL in a given season?

Proxy Tasks:

1. Which are the bottom 3 teams in a given EPL season?
2. Which are the top 3 teams in a given Division 1 season?

4. What was the position of a given team at the end of each season over all years?

Proxy Tasks:

1. How many points did a given team score as compared to every other team in the given seasons?
2. What was the positional trend based on the points in a given season?

5. Which club is leading champions over all seasons in EPL?

Proxy Tasks:

1. Which team topped the points table in a given EPL season?
2. How many times did the given team top the table?

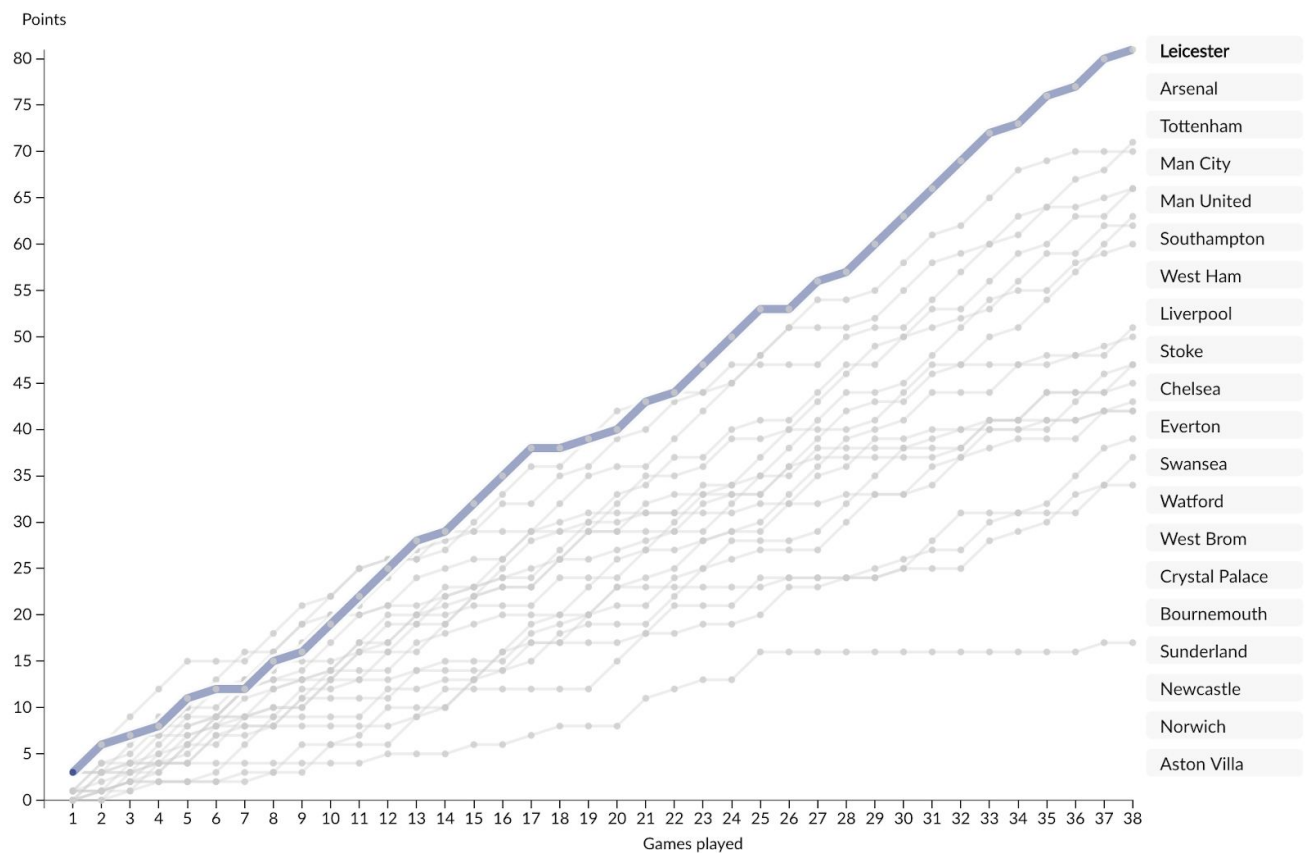
Story Design

Data Analysis

1. What is the position of a given team during the given season?

The below visualization shows analysis of a given team with respect to other teams during the given season. It gives us the insights on the total points scored by a given team and the position of a given team as compared to other teams.

Example Visualization for Season 2015-16 where Leicester won the season:



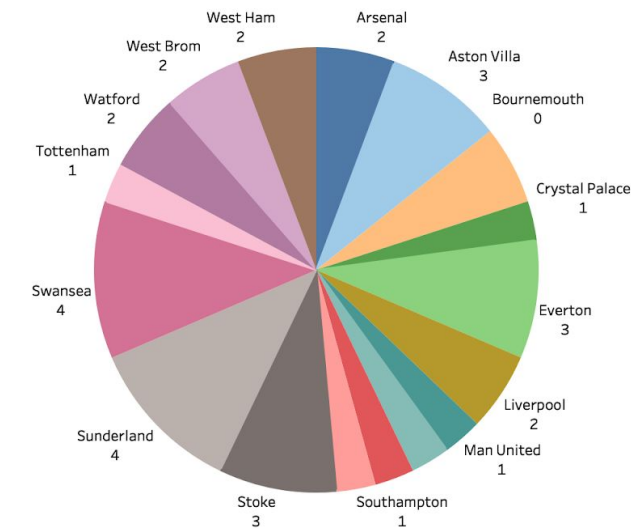
2. What is the total number of goals scored by a given team in the home and away matches? How many of them did they scored against a particular opponent over a season?

The below visualization shows performance of a given team in their home and away games. From this, we can easily identify if the given team is scoring well against particular opponent in home and away matches.

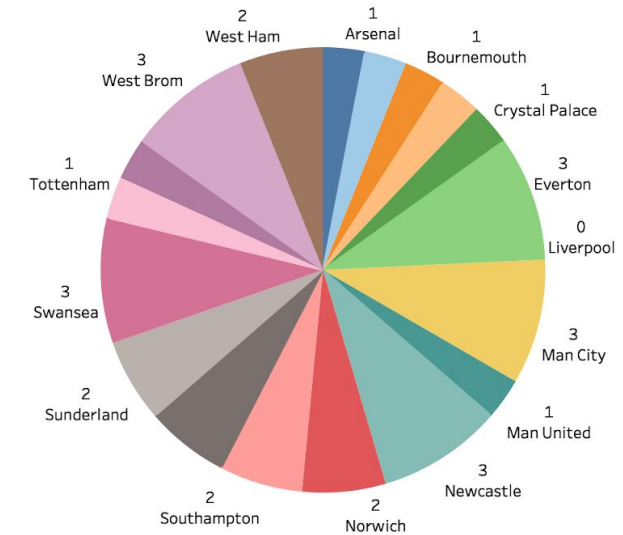
Example Visualization for Season 2015-16 showing Leicester performance in home and away games:

Leicester City had scored more number of goals against Swansea and Sunderland in home matches and against Everton and Newcastle in away matches.

Leicester Scoring Goals in Home Games V/s Away Teams



Leicester Scoring Goals in Away Games V/s Home Teams



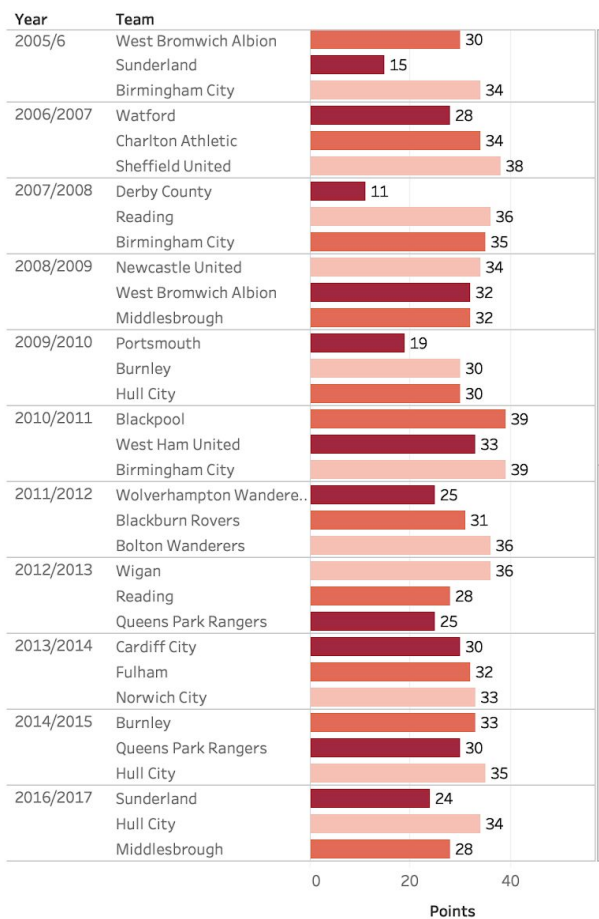
3. Which team were relegated and promoted from EPL in a given season?

Bottom 3 are relegated to Division 1 at the end of EPL Season while Top 3 teams in Division 1 Championship are promoted to play in EPL for next season. The below visualization answers our both of the questions showing relegated and promoted teams for each season.

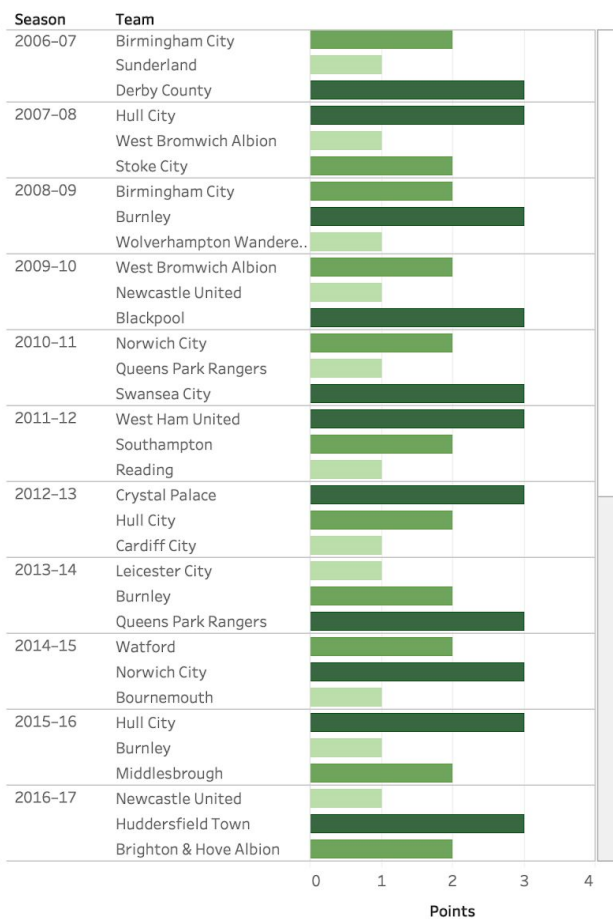
Example Visualization showing relegated and promoted teams from/to EPL between 2005/06 and 2016/17 Seasons:

The reason for analyzing and visualizing this was to depict the time when Leicester was relegated from the premier league in the year 2003 and how they rose back to the occasion and promoted back to the premier league in the year 2014, which was the year before they won the Premier League title.

Relaged Teams from EPL over all seasons



Promoted Teams from EPL over all seasons



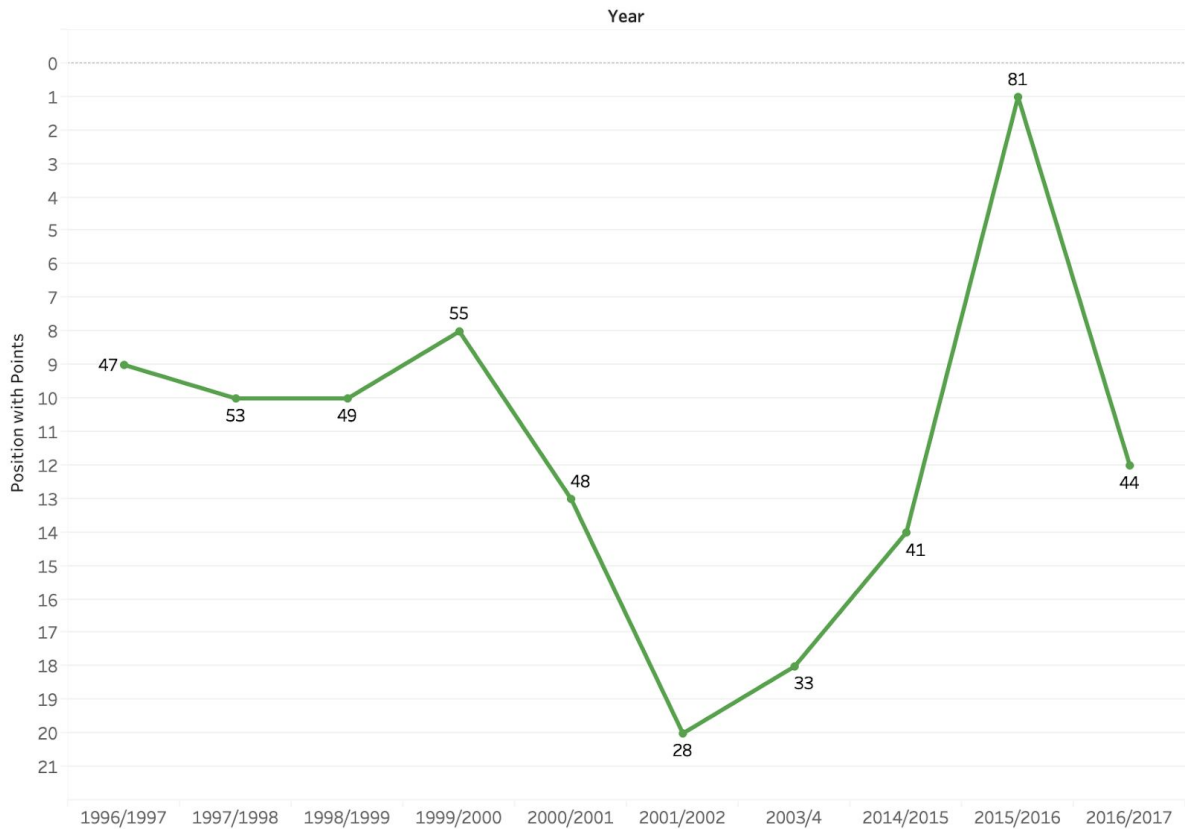
4. What was the position of a given team at the end of each season over all years?

The below visualization shows the trend of the given team in terms of position and points scored in that season at the end of each season over all years.

Example Visualization of Leicester over all the seasons:

Leicester City won the season 2015/2016 with 81 points.

Leicester City EPL Positions with Points over all season in EPL



The trend of sum of Pos for Year. The marks are labeled by sum of Pts. The data is filtered on Team, which keeps Leicester City. The view is filtered on Year, which keeps 10 of 66 members.

5. Which club is leading champions over all seasons in EPL?

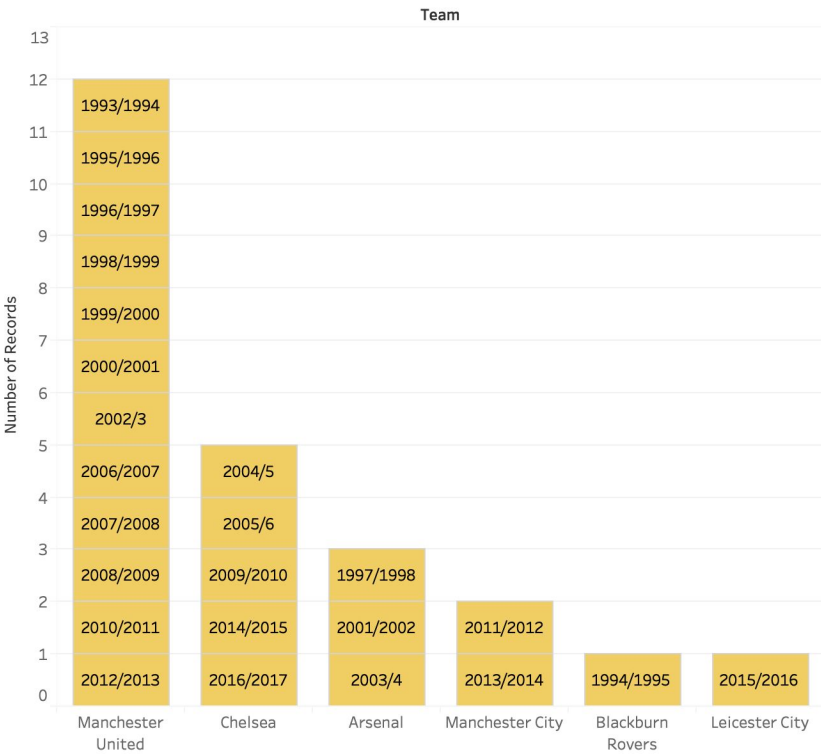
The below visualization shows the club who won the particular season along with total number of titles won.

Example Visualization of leading champions over all the seasons:

Manchester United is the leading champion here, winning over 12 titles.

The reason to visualize and analyze his was to portray how Leicester against all odds and the big dominant teams in the last era won the title.

Leading Champions over all seasons in EPL



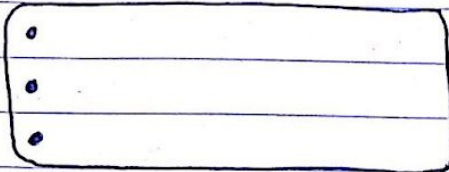
Sum of Number of Records for each Team. The marks are labeled by Year. Details are shown for Year. The data is filtered on Pos, which keeps 1. The view is filtered on Year, which keeps 24 of 66 members.

Storyboard

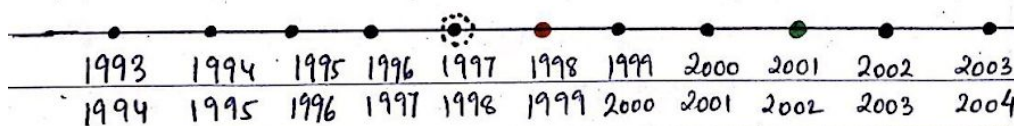
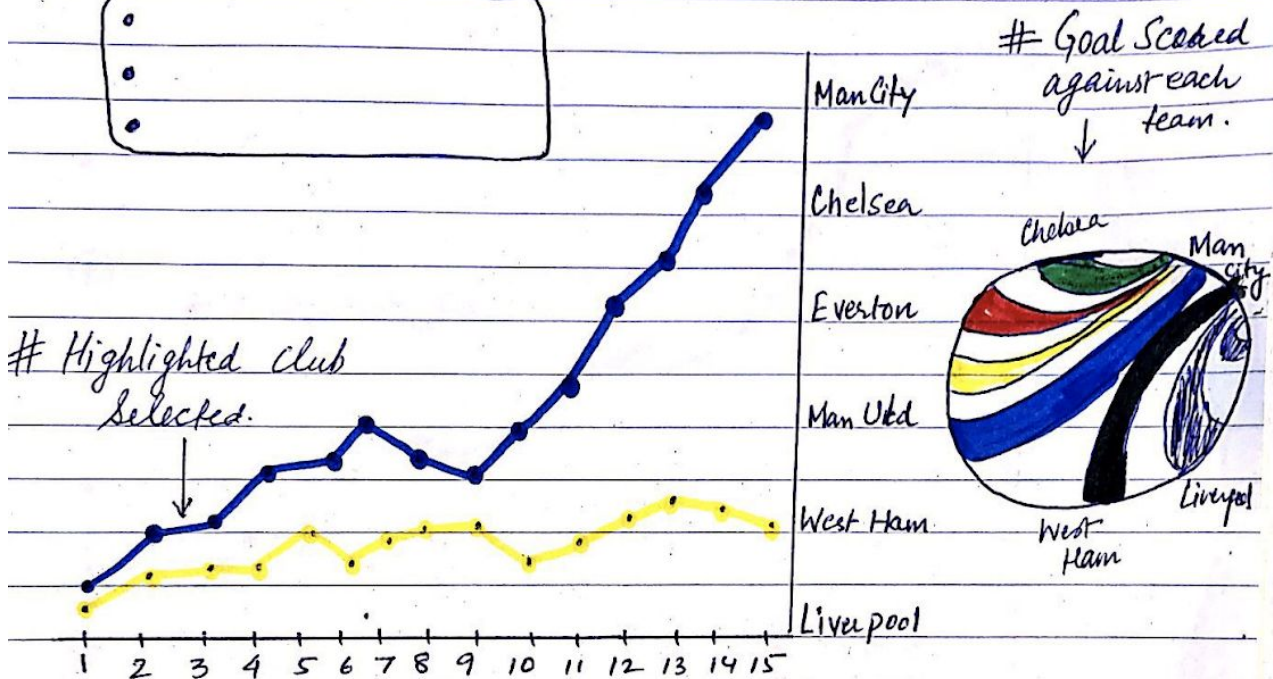
ROAD MAP 1

News Changes as we scroll.

NEWS



Highlighted club selected.



Our prime objective in our Storyboarding is to select a football club, (Leicester City) and show its performance against other clubs over the years. The above graph shows the overall position of the club during various seasons.

Furthermore, we will select a particular season and focus on the club's journey towards glory.

We name that story as "Road to Glory".

We will portray its ups and downs and how it overcame its roadblocks to prove themselves as Champions!!

ROAD MAP 2

1993

1994

1994

1995

1995

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1996

1997

1997

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2001

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2002

2003

2003

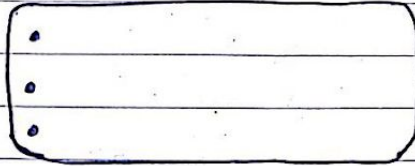
2004

2004

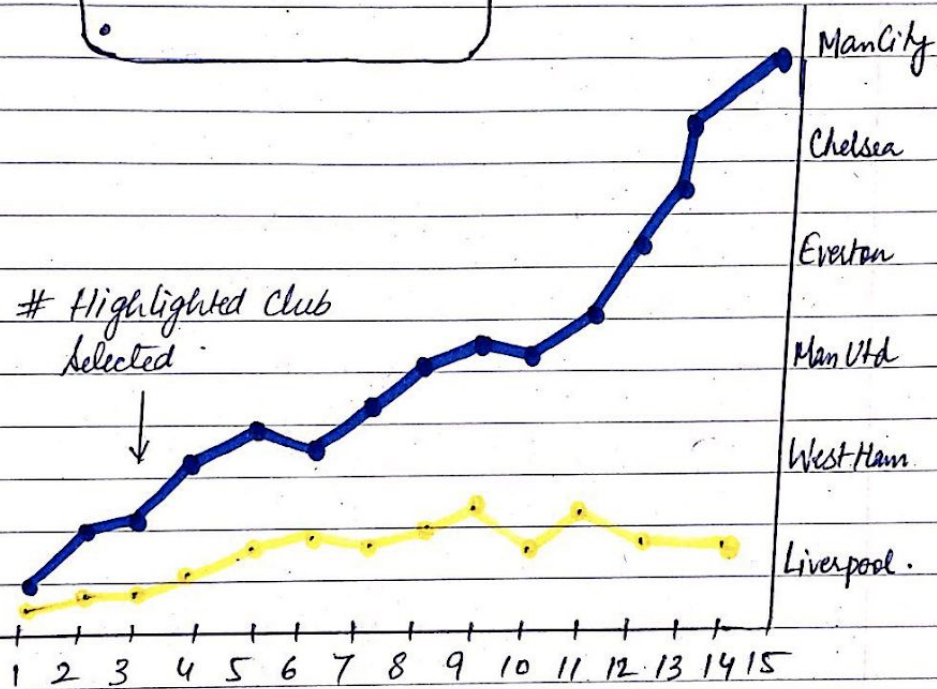
2005

News changes as we scroll.

NEWS



Highlighted Club
Selected



Man City

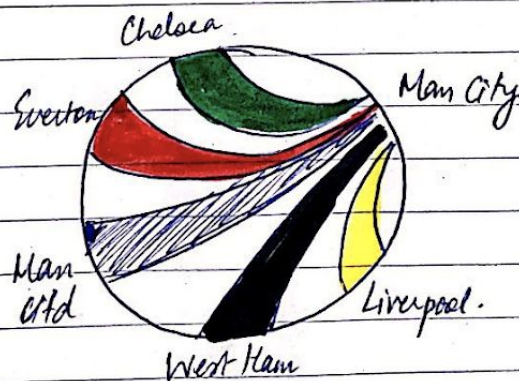
Chelsea

Everton

Man Utd

West Ham

Liverpool



Goals scored against each team

Leicester Story Highlights to Glory

Sample storyline which will be displayed in the project visualization to tell story of leicester of how they achieved the throne.

Rise and Fall from Premier league to the third tier

- Leicester moved into the new 32,500-seat Walkers Stadium at the start of the 2002-03 season, ending 111 years at Filbert Street. Walkers, the Leicestershire-based crisp manufacturers, acquired the naming rights for a ten-year period.
- In October 2002, the club went into administration with debts of £30 million.
- Manager Adams was banned from the transfer market for most of the season, even after the club was rescued with a takeover by a consortium led by Gary Lineker.
- Adams guided Leicester to the runners-up spot in Division One and automatic promotion back to the Premier League with more than 90 points. However, Leicester lasted only one season in the top flight and was relegated to the newly labeled Championship, previously known as Division One.
- 2004 - Adams resigned as manager and Craig Levein was appointed as the boss who proved to be an unsuccessful while his 15 months tenure before being replaced by assistant manager Rob Kelly as the new manager.
- On 22 November, Ian Holloway was appointed the manager, and he became the first Leicester manager in over 50 years to win his first league match in charge, beating Bristol City 2ñ0. However, this success did not last, and Leicester was relegated from the Championship at the end of the 2007ñ08 season. Holloway left by mutual consent after less than a season at the club, being replaced by Nigel Pearson.

Third tier to the premier league

- The 2008-09 campaign was Leicester's first season outside the top two levels of English football, but they hit this nadir only seven years before becoming the 2015-16 Premier League champions - the fastest seven-year rise to the top of the English football league system apart from Ipswich Town in 1962.
- Following relegation to the third tier the previous season, Leicester returned to the Championship at the first attempt in 2008-09, finishing as champions of League One after a 2-0 win at Southend United, with two matches in hand.

Rising back to the premier league in 2014 after a ten-year absence

- In 2014, Leicester's march up the league system hit a breakthrough. Their 2-1 home win over Sheffield Wednesday, combined with losses by Queens Park Rangers and Derby County, allowed Leicester City to clinch promotion to the Premier League after a ten-year absence.
- Later that month, a win at Bolton saw Leicester become the champions of the 2013-14 Championship, the seventh time they had been champions of England's second tier.

BreakThrough season of 2015-2016 of becoming the new Premier League champions

- Leicester reacted by appointing former Chelsea manager Claudio Ranieri as their new manager for the new 2015-16 Premier League season. Under Ranieri, the club made an exceptional start to the season. Striker Jamie Vardy scored 13 goals over 11 consecutive matches from August to November, breaking Ruud van Nistelrooy's Premier League record of scoring in 10 consecutive matches. On 19 December, Leicester defeated Everton 3-2 at Goodison Park to top the Premier League on Christmas Day, having been bottom exactly 12 months earlier. A 2-0 victory at Sunderland on 10 April, coupled with Tottenham Hotspur's 3-0 win over Manchester United, ensured Leicester's qualification for the UEFA Champions League for the first time in their history.
- Leicester won the Premier League on 2 May 2016 after Tottenham threw away a 2-0 lead against Chelsea, drawing 2-2 at the "Battle of Stamford Bridge". This completed the fastest seven-year rise to the title except for Ipswich Town in 1962, and Leicester faced a far more unequal top tier than Ipswich did back then. Bookmakers thought Leicester's victory was so unlikely that Ladbrokes and William Hill offered odds of 5,000-1 for it at the start of the season. Neither bookmaker had ever paid out such long odds, and the trophy resulted in the largest payout in British sporting history with total winnings of £25 million.

Implementation (Phase I)

List of Items Implemented:

1. Data Transformation:

- As Leicester City won the 2015-16 Premier League season, we transformed the data as per the following:

Transformation I (Season Game Progress Tracker):



Transformed Data Attributes Description:

| Attribute | Description | Range and Values | Data Type | Attribute Type |
|-----------------|--|---|-----------|----------------|
| Team | Name of the Playing Team | Name of the 20 Teams playing league during the season | String | Categorical |
| Match No. | Game Number of the playing team | 1 to 38 | Numerical | Ordinal |
| Current Points | Total Points of the team after playing the match | 0 to max points earned | Numerical | Quantitative |
| Goal Difference | Difference of goals against the opponent team in the match | negative to positive difference | Numerical | Quantitative |

- This transformation will be used in our first interactive visualization (EPL Team Progress Tracker) which will show how Leicester City progressed game by game.

Transformation II (Performance Analyzer):



Transformed Data Attributes Description:

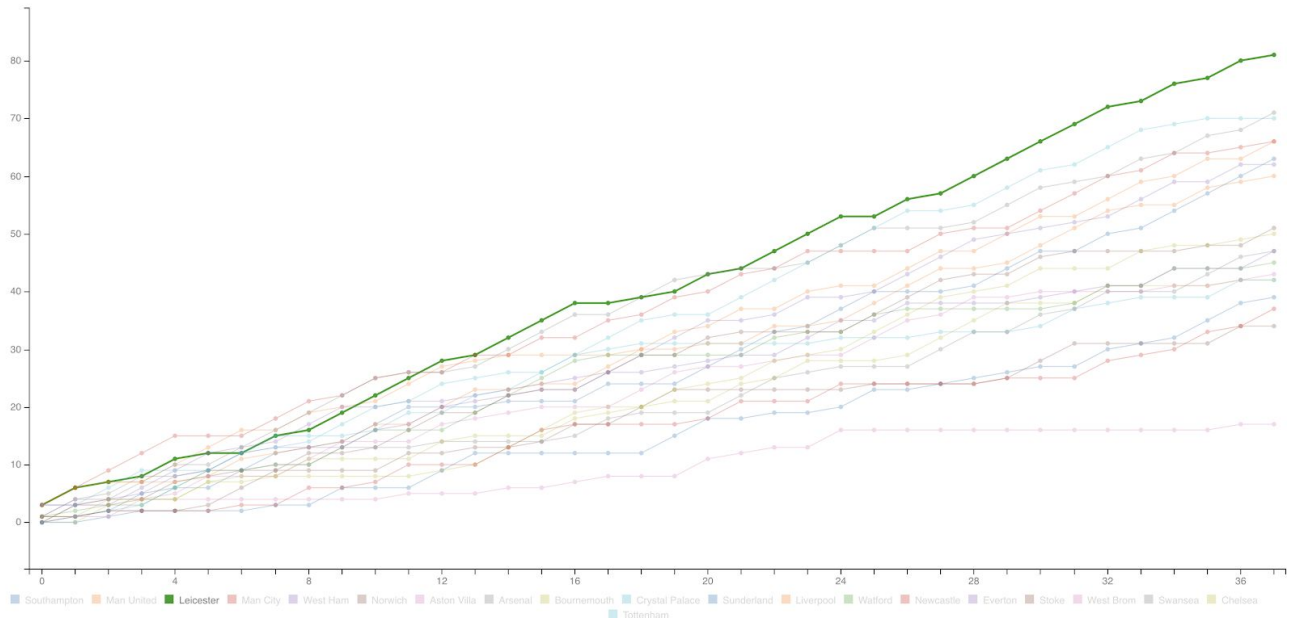
| Attribute | Description | Range and Values | Data Type | Attribute Type |
|---------------|--|---|-----------|----------------|
| PlayingTeam | Name of the Playing Team | Name of the 20 Teams playing league during the season | String | Categorical |
| Opponent Team | Name of the Opponent Team | Name of the 20 Teams playing league during the season | String | Categorical |
| Total Goals | Aggregated Goals scored by playing team against opponent team in all EPL matches | 0 to max goals scored | Numerical | Quantitative |

- This transformation will be used in our second interactive visualization (EPL Team Performance Tracker) which will show against which opponents Leicester City came strong.

2. Programming Visualizations using D3:

Visualization 1:

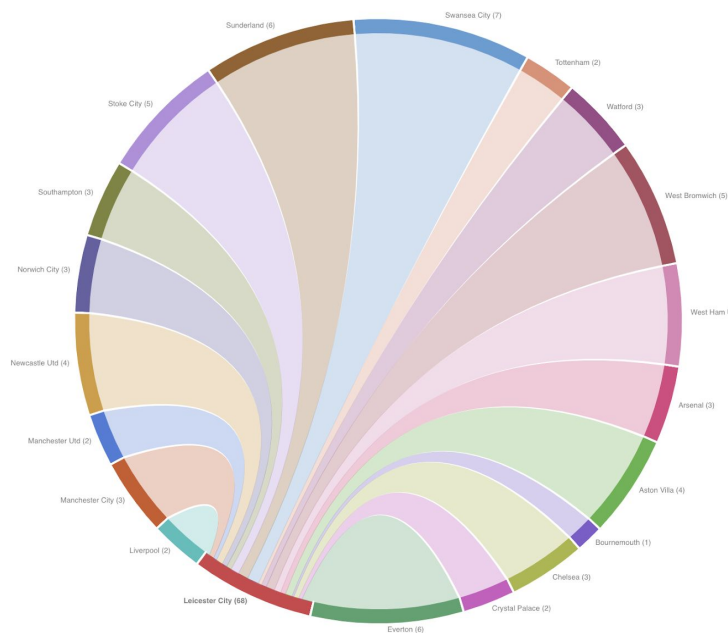
EPL Season 2015-'16 Game Progress Tracker



- A D3 Interactive Visualization is created to show the journey of Leicester City towards the EPL Triumph.
- It shows the game-by-game analysis that shows the path that Leicester City took to what many are calling the most remarkable championship in professional soccer history and beat the odds of 5000-to-1.

Visualization 2:

EPL Season 2015-'16 Performance Analyzer



- A D3 Interactive Visualization is created to show the performance of all teams to a particular opponent in season 2015-'16.
- From this visualization, we can analyze how Leicester City aced against a particular team in season 2015-'16.

List of Items to be Implemented in Phase II

- Leicester City Timeline Chart
- Dynamic News Events
- Story content based on the timeline

Development Work

Submission Link (Git Classroom)

| | |
|---|---|
| Git Repository | https://github.com/NYU-VIS-FALL2018/storytelling-group-20-story-of-epl-champions |
| Deployment Website (Current Version) | Website Deployment Controls to Administrator (Refer Personal Link to view website) |

****Note: The development work is carried in incremental fashion throughout last 2 weeks by the team and can be viewed in our personal repository. Git Classroom is used for the purpose of submission.**

| | |
|---|---|
| Git Repository | https://github.com/akshaytambe/EPL-InfoViz |
| Deployment Website (Current Version) | https://akshaytambe.github.io/EPL-InfoViz/ |

Changelog

- Nov 27, 2018 - As per the suggestions by the Instructor, we are now focussing on one premier league team instead of all to cover their Premier League Triumph.