



# NBA Visualizations

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# Project Logistics and Requirements

- ❑ Python Flask API and MongoDB
- ❑ D3.js Interactive Scatter Plot
- ❑ Web Scraping and Plotly
- ❑ JS library not covered in class: Highcharts
- ❑ User-Driven Interaction: Interactive Geo-Map (clickable)
- ❑ 5 Visualizations: Geo-Map, Radar Chart, Pie Chart, D3 Interactive Scatter Plot, and Highcharts



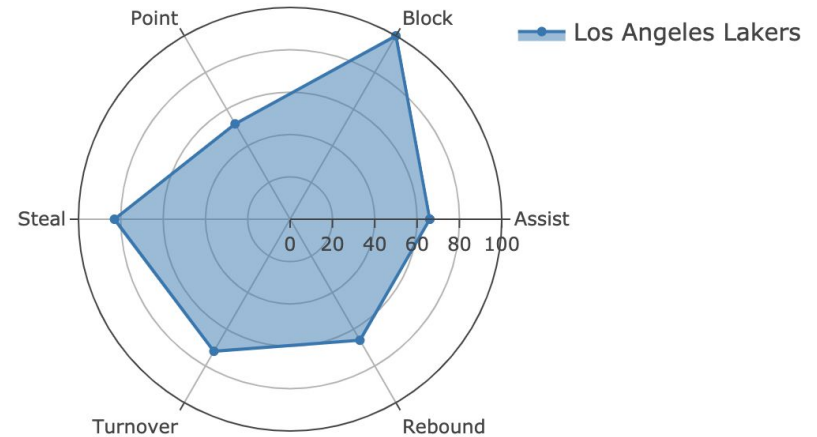
# Geo-Map: Plotting all 30 NBA teams

- ❑ Team logo as markers
  - ❑ Located a Github repository with all 30 logos in .png
- ❑ Clickable markers
  - ❑ Displays full team name
  - ❑ Radar chart, pie chart, and highcharts are interactive based on click
- ❑ Coordinates adjusted
  - ❑ Help view all teams on 0 zoom map

# Radar Chart: Team Statistical Comparison vs League

- ❑ Each major statistic ranked against the entire NBA (30 teams)
  - ❑ Points
  - ❑ Rebounds
  - ❑ Assists
  - ❑ Blocks
  - ❑ Steals
  - ❑ Turnovers
- ❑ Axis: 0% - 100%
  - ❑ 100% = outer = ranked most in the league
  - ❑ 0% = inner = ranked least in the league

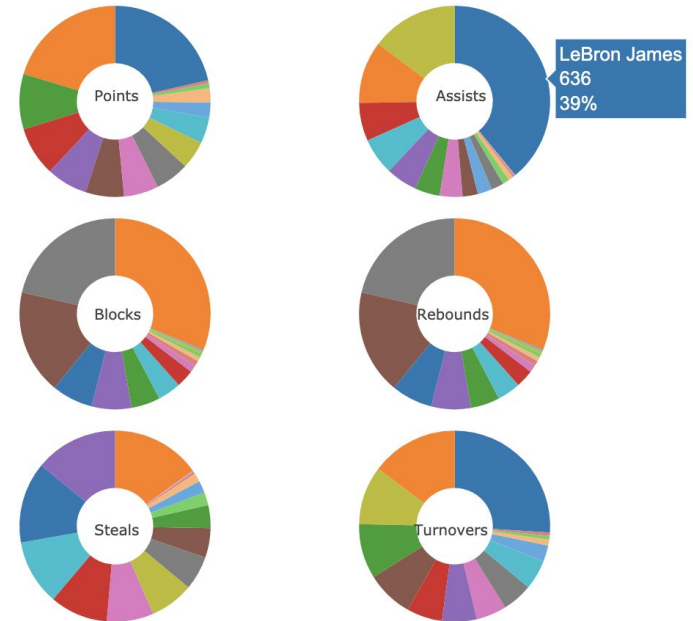
Team performance radar chart



# Pie Chart: Individual Player Comparison

- ❑ Responds to a click on the geo-map marker.
- ❑ Shows team leaders (and non-leaders) in 6 categories:
  - ❑ Points
  - ❑ Assists
  - ❑ Blocks
  - ❑ Rebounds
  - ❑ Steals
  - ❑ Turnovers
- ❑ Each donut segment displays popup with player's name and data related to respective category.

Team status detail

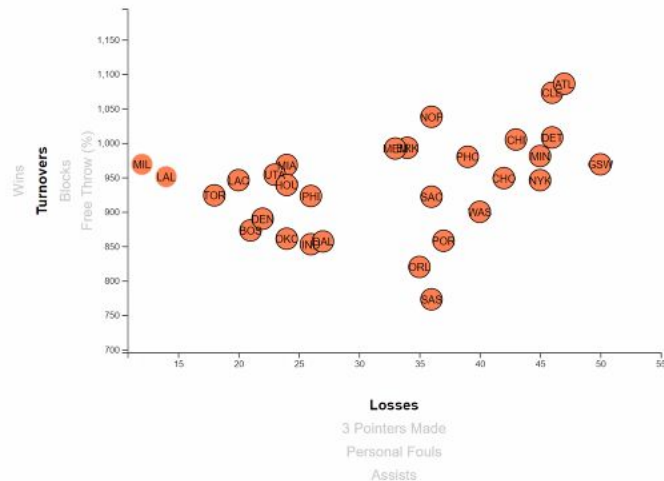


# D3 Interactive Scatter Plot

- ❑ Compares NBA team stats
  - ❑ Assists vs Turnovers
  - ❑ Blocks vs Personal Fouls
  - ❑ Three pointers made vs Free throw percentage
  - ❑ Wins vs Losses

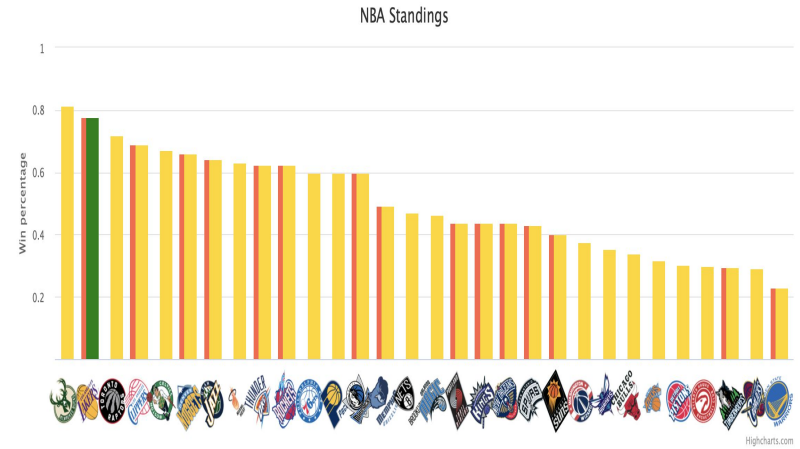
## NBA Comparison Stats

Team abbreviations are inside circles



# Highcharts

- ❑ Lists teams ranked by most to least wins.
- ❑ Responds to a click on the geo-map marker to show the following:
  - ❑ Green shading = a team in the playoffs
  - ❑ Red shading = did not make playoffs
  - ❑ Blue shading = Eastern conference
  - ❑ Orange shading = Western conference





Questions?