Milestone 2

1、Sketches of visualization

1.1 Basketball court map as a heatmap

This graph shows on the basketball court where the player makes the most and least successful shots to the hoop. This is seen in the form of a heatmap where green represents a successful launch rate at that location and red represents a rate close to zero.

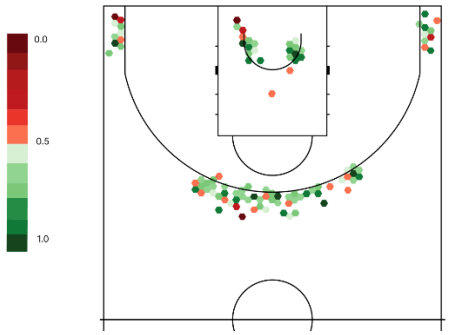

Figure 1: Basketball Court Heatmap for a single player

1.2 Vertical version with interactive time bar

Figure 2 is a vertical shot visualization sketch, which visualizes the direct line distance of each shot relative to the basketball hoop on the vertical plane. It also indicates whether the shot went in or not, with blue indicating a goal and red indicating a miss. The image also has a timeline to visualize at what time of the game each shot was taken.

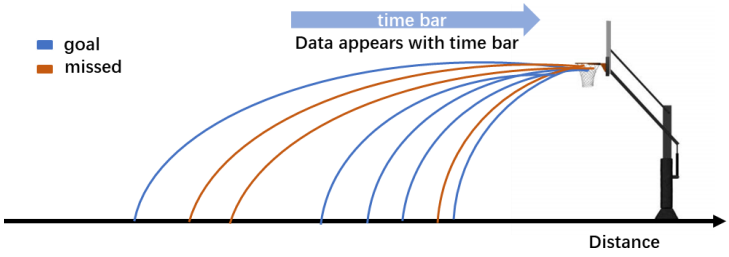

Figure 2: Vertical version with interactive time bar

1.3 Radial chart

Here is a description of the Figure 3 radial chart, where each ring represents the number of one-point, two-point, and three-point baskets made in each game over the past year (each ring represents a season, with each point on the ring representing a game, and the colors indicating the number of baskets scored for each point value). At the end of the rings, there might be histograms (not shown here) that summarize the total number of baskets made for each point value over the year.

2、Tools

Javascript tools(lectures 2, 3), D3.js(lectures 4, 5), and basic web development (lecture 1).

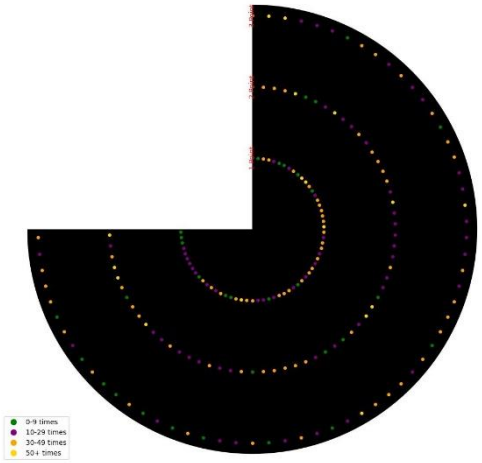

Figure 3: Radial chart

3、Break down of the goal

3.1 Core visualization

Our core visualizations as illustrated in Sketches of visualization include flat court visualization based on heatmap, vertical shot visualization, and score-game field visualization with circled plots.

3.2 Extra ideas

3.2.1 Goal-scoring ratio

Figure 4 shows the distribution of points scored in a game, with the three corners of the triangle representing one-point, two-point, and three-point goals. Normalizing the data over the whole game, the points lean into whichever side of the triangle indicates which score scored more goals in that game.

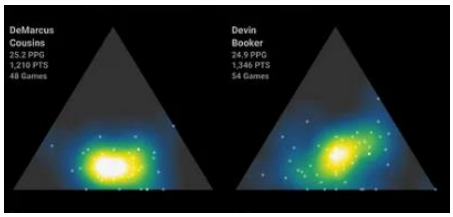

Figure 4: Goal-scoring ratio Figure

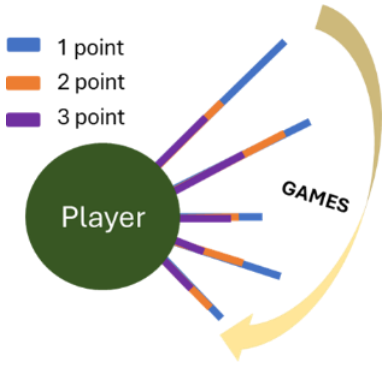

Figure5: Players' goals statistics chart

3.2.2 Players' Goals Statistics Chart

Figure 5 shows the different proportions of one, two, and three-pointers a particular player scores in each game, and the graph is divided into three tiers, each containing one type of point's goal scoring. This chat has different layers, and each layer represents a player.