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CS 467: Final Project

A visualization of the motion of soccer

Shots and Goals

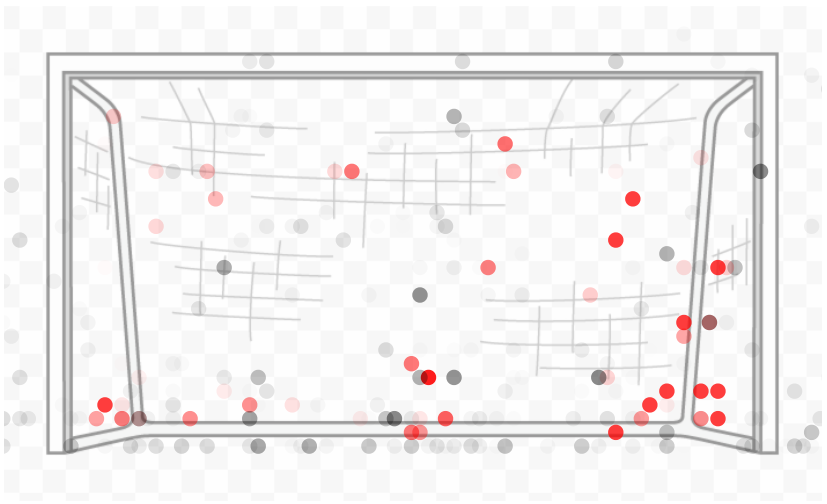
This design visualizes the spatial layout of attempted shots and their conversion to goals on a regulation sized soccer goal post. Begin by selecting a team. All team data is displayed by default and can be further filtered by competition season and shot type.

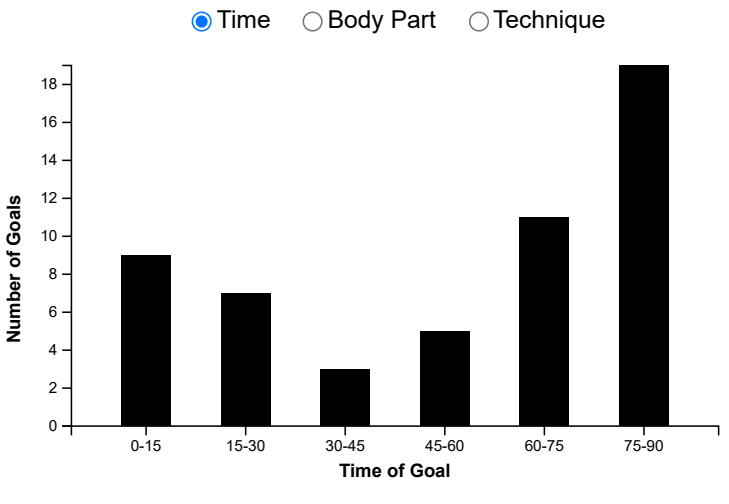
Each shot is denoted by a point drawn on the goalpost.

Red points denote shot attempts that ended up in goal, while
Black points denote attempts that were blocked or off-target.
Opacity denotes a shot's xG (eXpectedGoals) statistic, a popular metric used to measure the likelihood of scoring. Easier shots have high xG and appear more solid, while harder shots have lower xG and appear more transparent.

The barchart on the right displays analytics for the selected data.

Time: 15-minute interval during which successful goals were made
Body Part: Which body part was used to make shot attempts
Technique: How shots were made (*Hover for more*)





Team Real Madrid | **Season** All | **Shot Type** All

Passes and Assists

These designs visualize the spatial distribution of passes and assists over the pitch. The pitch is a regulation-sized 120-by-80 yard field. The selected team's direction of play is to the right.

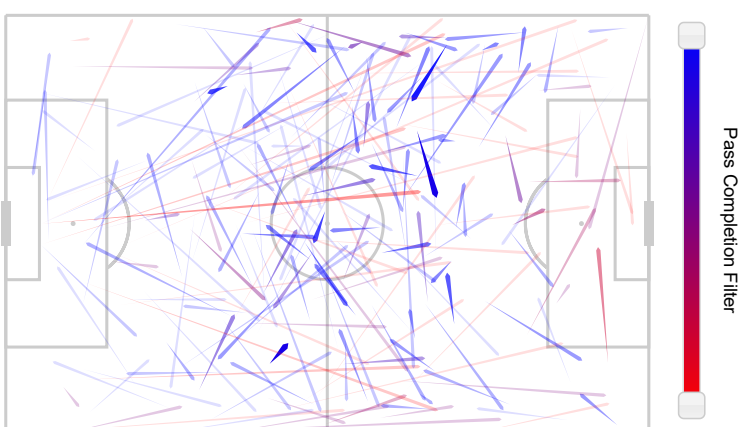
Aggregated Passes

In any particular match, each team will make several hundred passes. In this visualization, passes are spatially aggregated over an entire season via K-Means clustering. The number of matches aggregated is noted above the pitch. Each aggregate pass represents a cluster of similar passes, and is represented by a tapered line, with start and end points corresponding to the thin and thick ends respectively. Thicker and darker lines represent more common passes.

Each cluster is also colored by how often the pass is **complete** or **incomplete**. Use the filters to focus on passes of a certain length or passes that more or less likely to be successfully received.

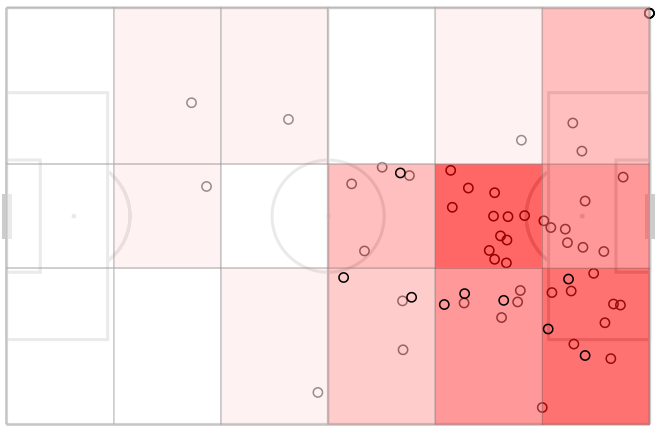
Team Barcelona | **Season** Champions League (200

Aggregate over 1 match



Team Barcelona | **Season** La Liga (2010/2011)

Aggregate over 33 matches



Assists Heatmap

An assist is commonly understood to be the last pass to the scorer of a goal. Each assist is denoted by a ring drawn on the pitch. The pitch is divided into a 6x3 grid commonly used by coaches (see for example, Zone 14) with the central strip as wide as the six yard box. Each cell of the grid represents a zone.

The color **intensity** of a zone represents the frequency of assists that originated from that zone.

Powered by STATSBOMB
INSIDE EVERY PASS, EVERY SHOT, EVERY MOVE

Data is provided by the StatsBomb Open Data repository, a highly annotated database of select soccer matches. Learn more about StatsBomb and their data collection here.
For the purposes of this visualization, the data presented has been first filtered, cleaned, and aggregated by attributes of interest.
The user should note that this dataset is purposely limited by StatsBomb and may not contain complete data for any team or league.