* **Background and Motivation.** Discuss your motivations and reasons for choosing this project, especially any background or research interests that may have influenced your decision.

Visualizing basketball player abilities properly based on statistics is always a hot for sport analysts and basketball fans. There are various basketball data analyzing tools on the internet nowadays, but not many of them can provide user-friendly up-to-date visualizations for general purposes. As basketball enthusiasts, we want to provide such an easy-to-use player profiler for non-experts to explore data and create visualizations based on their own demands.

* **Project Objectives.** Provide the primary questions you are trying to answer with your visualization. What would you like to learn and accomplish? List the benefits.

The primary questions are:

How does a player behave in different locations of the court?

What is a player’s overall performance?

How to classify data attributes and create general visualization template?

We would like to learn methods for visualizing spatial distributions and provide tools to measure the player’s performance in terms of court locations.

We could like to build a dynamic query tool for visualizing and comparing player’s over performance.

We would try to build generic visualization templates and styling tools for users, so that they can create visualizations with their own styles and tastes.

* **Data.** From where and how are you collecting your data? If appropriate, provide a link to your data sources.

We will collect data from the API provided by nba.stats.com. The API will generate JSON files with raw data based on query parameters we provided. An example for Kobe Bryant’s career statics is provided here: http://stats.nba.com/stats/playercareerstats?PerMode=PerGame&PlayerID=977

* **Data Processing.** Do you expect to do substantial data cleanup? What quantities do you plan to derive from your data? How will data processing be implemented?

We will do substantial data cleanup for most of our data. Since the data we will obtain are in general play-by-play raw records, we need to compute some meaningful statistical quantities such as the probability density distributions (PDF) for players. The data processing will be done in real time since we don’t want to hold data on our own server. So, the processing program will be implemented with JS also. The mathematics behind the processing program should agree with other processing techniques, which is not the main interest of our project.