CPSC 436V Milestone 3

NBA Hometown Heroes

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Overview

The skill level in the NBA is at an all time high with the advancements in technology. The use of advanced analytics has increased through the league as organizations seek to gain advantage over their competition. In 2020, it was reported that the 30 teams making up the NBA have an average valuation of 2.12 billion USD each, while the NBA generated approximately 8.76 billion USD in revenue. When millions of dollars are at stake in the organization, the use of sports data is incredibly useful when evaluating the market value of players.

However, in our research there is a lack of visualizations that capture the relationship between NBA players and their physical locations. Basketball is a sport that is deeply ingrained into the culture of communities across the world. Where a player is raised can speak volumes about the type of player they are and how their games are influenced by those who came up before them. NBA players can have a significant impact on the cities they played for over the course of their careers.

NBA Hometown Heroes tells a visual story of the careers of NBA players. The application will show the journey that an NBA player takes to make it to the league, their performance over the course of their careers relative to their competition at the time. Fans can expect to learn more about the history of NBA players.
Represent Your City

The identity of an NBA player is rooted in the communities they grew up in. These are the places they put on the map.

NBA Players
- 1 to 4
- 4 to 7
- 7 to 18
- 18 to 14
- 17 to 17
- 17 to 20
- 20 to 23
- 23 to 26

1986

New York

In 1986 there were 26 active players in the NBA from New York.
They had a combined average total PTS of 619.42.

Sam Perkins - PF

Age: 24
Height: 266 cm
Weight: 106 kg
PTS: 1234
College Connection

Sam Perkins went to the University of North Carolina.

Since 1950, 56 players in the history of the NBA have attended the University of North Carolina.

11 other players from his alma mater are also born in New York.

Historically, the University of North Carolina has produced:

- 1 players who play as a F
- 1 players who play as a G
- 12 players who play as a S6
- 8 players who play as a SF
- 11 players who play as a PG
- 14 players who play as a PF
- 9 players who play as a C

Road Trippin'

The NBA Journey of Sam Perkins

- Born in Brooklyn, New York in 1961
- Went to college at University of North Carolina
- Played for the Dallas Mavericks in Dallas, Texas from 1985 to 1991
- Played for the Los Angeles Lakers in Los Angeles, California from 1991 to 1994
- Played for the Seattle SuperSonics in Seattle, Washington from 1993 to 1999
Dataset Description

Datasets

The following datasets are used for our visualization

- NBA Dataset
- Locations are scraped from Google Maps API
- US States JSON

The NBA dataset was used for all the statistical data about the players. For each location, we added an associated JSON object representing the location from the Google Maps API. The US states JSON is used for figuring out what the abbreviation of each state is and the states associated data.

Season Stats Attributes

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Attribute Description</th>
<th>Quantitative / Ordinal / Categorical</th>
<th>Cardinality/Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pos</td>
<td>Player Position</td>
<td>Categorical</td>
<td>23</td>
</tr>
<tr>
<td>Name</td>
<td>Name of player</td>
<td>Categorical</td>
<td>3921</td>
</tr>
</tbody>
</table>
| Age       | Age at start of season                                    | Quantitative                         | Min = 18  
            |                                                           |                       | Max = 44          |
| Year      | NBA Season (Season ends the following year so 2012 means  | Ordinal                              | Min = 1950    
            | 2012-2013 season)                                        |                       | Max = 2017        |
| Tm        | Team                                                      | Categorical                          | 69                |
| G         | Games played                                              | Quantitative                         | Min = 1  
            |                                                           |                       | Max = 88          |
| MP       | Minutes per game | Quantitative | Min = 0  
|          |                 |             | Max = 3882 |
| GS       | Games started   | Quantitative | Min = 0  
|          |                 |             | Max = 83  |
| FGA      | Field goal attempts | Quantitative | Min = 0  
|          |                 |             | Max = 3159 |
| FG%      | Field goal percentage | Quantitative | Min = 0  
|          |                 |             | Max = 1   |
| 3PA      | 3 point attempts | Quantitative | Min = 0  
|          |                 |             | Max = 886 |
| 3P%      | 3 point percentage | Quantitative | Min = 0  
|          |                 |             | Max = 1   |
| 2PA      | 2 point attempts | Quantitative | Min = 0  
|          |                 |             | Max = 3159 |
| 2P%      | 2 point percentage | Quantitative | Min = 0  
|          |                 |             | Max = 1   |
| eFG%     | Effective field goal percentage | Quantitative | Min = 0  
|          |                 |             | Max = 1.5 |
| FTA      | Free throw attempts | Quantitative | Min = 0  
|          |                 |             | Max = 1363 |
| FT%      | Free throw percentage | Quantitative | Min = 0  
|          |                 |             | Max = 1   |
| ORB      | Offensive rebound | Quantitative | Min = 0  
<p>|          |                 |             | Max = 587 |
| DRB      | Defensive rebound | Quantitative | Min = 0  |</p>
<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Type</th>
<th>Min</th>
<th>Max</th>
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</thead>
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<tr>
<td>TRB</td>
<td>Total rebounds</td>
<td>Quantitative</td>
<td>Min = 0</td>
<td>Max = 2149</td>
</tr>
<tr>
<td>AST</td>
<td>Assists</td>
<td>Quantitative</td>
<td>Min = 0</td>
<td>Max = 1164</td>
</tr>
<tr>
<td>STL</td>
<td>Steals</td>
<td>Quantitative</td>
<td>Min = 0</td>
<td>Max = 301</td>
</tr>
<tr>
<td>BLK</td>
<td>Blocks</td>
<td>Quantitative</td>
<td>Min = 0</td>
<td>Max = 456</td>
</tr>
<tr>
<td>TOV</td>
<td>Turnover</td>
<td>Quantitative</td>
<td>Min = 0</td>
<td>Max = 464</td>
</tr>
<tr>
<td>PF</td>
<td>Personal foul</td>
<td>Quantitative</td>
<td>Min = 0</td>
<td>Max = 386</td>
</tr>
<tr>
<td>PTS</td>
<td>Points</td>
<td>Quantitative</td>
<td>Min = 0</td>
<td>Max = 4029</td>
</tr>
<tr>
<td>TS%</td>
<td>True shooting percentage</td>
<td>Quantitative</td>
<td>Min = 0</td>
<td>Max = 1.136</td>
</tr>
</tbody>
</table>
Preprocessing Pipeline

Before the data is fed into the visualizations, the data was first run through a script to generate all the latitudes and longitudes of all the places mentioned in the NBA data. Colleges, teams, and hometown were fed into Google’s Geocoding API. We query the name of the college, hometown, or city the team is based in and the Geocoding API will return an JSON object filled with geographic information about the query. A challenge with using this API is that there is a rate limit on the amount of requests we can send, so sometimes requests return with an error code although the query is perfectly formed. To circumvent the rate limit, we just implemented a retry mechanism that will keep retrying requests that have been rate limited.

Once we have all the data from the google API, that data is exported as multiple JSON files (each for the type of location: hometown, college, and team) and will be read by the visualization once it’s loaded. That information is then converted into a dictionary where the latitude and longitude will be returned based on the location as a key.

After the data is loaded, the player dataset is filtered to remove players that do not have a birth state. This is because the first visualization groups all the players by state, and without it, a player won’t be visible in the visualization.
Goals and Intended Task

Usage Scenarios and Tasks

**Note:** Usage scenario with tasks (tasks are indicated in brackets, i.e. [task]). We will reference specific sketches as well, please see the next section for the sketches.

Scenario 1

Jane is a sports reporter for her local news station. In her preliminary research of a potential story about the NBA, she wants to [explore] historical data to [identify] the players that may have a connection to her city or town.

Jane can do his tasks by first looking at the cartogram and selecting a year and state of interest. Selecting the state, she will filter the scatter view to show what players were active from that state and year. She can find a NBA player of interest that she wants to write a story on. The view also assists her research by contacting players that may have competed with the player of interest over the course of their career.

Scenario 2

Dave is an NBA fan and wants to learn more about the history of the NBA and can add to his basketball knowledge. He wants to [explore] and [compare] players stats from various states and so he can debate with his friends arguably who is the best player. He also wants to [see] all the NBA players who went to their favourite player's alma mater as well as the teams that they have played on.

Dave can do his tasks by first looking at the cartogram. By adjusting the slider, he can see how the composition of the league has changed over the course of the history of the league. Selecting a state, he will filter the scatter view to show what players were active from that state and year. Selecting a specific player of interest will allow him to [identify] connections to players that he may not have known about before. By changing the year on the timeline, Dave will be able to see how the player’s stats rank among his peers over time.
Visualizations

Short description on how our visualizations tell the story and how they are linked to each other. Further details can be found in the sections below.

Cartogram/Choropleth

The cartogram shows the composition of the NBA players based on birthplace. Rectangular point marks are roughly laid out in the shape of the continental US (with the addition of Canada and a mark for international players). In order to adjust for league expansion since 1950 and fluctuations in players per year in the NBA, a septime scale normalizes player counts for each season. The range of colours generated using ColorBrewer encodes the derived attribute of the relative numbers of NBA players born in a state for a given season.
A slider widget allows the user to visualize the temporal effect on the composition of the NBA. The decline in players representing the Mecca of Basketball, New York, is observed, in addition to the rise of international talent.

![Cartogram with New York selected](image)

**Figure C-1: Cartogram with New York selected**

By purposefully hiding player information, the design encourages the user to explore the map by hovering over each state to reveal the tooltip, and to adjust the slider. Selecting a state toggles the visibility of the latter views, which creates an affordance on how the user can interact with the application. The selection of a state allows the user to discover which players are born in the state in the next visualization (Figure C-1).
After selecting a state and year from our first view (Cartogram), the Bubble Chart then visualizes the chosen statistic (controlled by filter at top left) of all players within the selected state and year. The following stats (choices) are present in the filter:

- G
- MP
- FGA
- FG%
- 3P%
- 3PA
- FTA
- PTS
- FT%
- TRB
- AST
- STL
- BLK
- TOV
- PF

By default, points (PTS) is the initially chosen statistic. Please see Season Stat Attributes under Dataset Description for ranges and descriptions of these different statistics.
In this visualization, **point marks** (circles/bubbles) are used to represent a player. The marks use the following channels, **area** (2D size, quantitative) to encode the statistic itself (using a **square root scale** to prevent exponential size increments) and **color** (hue, categorical [cardinality of 23 but narrowed to 7]) to encode the position they play (legend shown on the bottom right in image above).

Area was chosen as a channel, because users can quickly identify which players are the best in a single statistical category in comparison to each other (human vision dependent on context). Thus, the bubble chart can quickly help users to identify which players stand above the rest of their peers in a given year and state. However, it doesn’t work well for statistics where a lower quantity indicated better performance. Players with high turnovers would be the most visually salient in this view, but are less efficient players.

Color was chosen as a channel, because it was the strongest channel we could use for a categorical attribute. Furthermore, we narrowed down the number of positions from 23 to 7 by grouping related positions together; this was done to limit the number of bins to a more manageable amount (as we learned in class, it is best to limit it to a number below 12). The colors used in this view are the following (hex):

- G: '#fd8880',
- PG: '#f298aa',
- SG: '#123ddb',
- F: '#290149',
- SF: '#73112c',
- PF: '#6b011f',
- C: '#ff3586',

The color palette was created using ColorBrewer as a starting point. Adjustments were made to balance making it color safe while matching our distinct visual style. The color legend on the side also works as an interactive filter, allowing the user to only highlight a single position they wish to look at (see **Figure BC-3**). This was done to help them complete their identification and comparison tasks better.
In the 1986 NBA season, there were 26 active players in the NBA from New York. They had a combined average total PTS of 619.42.

Kareem Abdul-Jabbar - C
Age: 38
Height: 218 cm
Weight: 102 kg
PTS: 1846
Hall of Fame

Figure BC-3: Bubble Chart Activated Color Filter

As mentioned in our M1 proposal, a user can then drill down from this view to filter the data further down to a single player. Some basic information about them is provided in a mouseover tooltip, and when you click the player (bubble), the node turns green, and more information is displayed on the left under the heading of the player’s name (see Figure BC-3). This was done to provide the user with more information to enable them to complete the tasks mentioned above. The Selected Player then acts as a trigger for the interaction between this view and the network view and map view (linked through player selected).
The last additional piece of interaction for this view is that there are hover tooltips that display some additional information as needed.

Figure BC-4: Bubble Chart hover tooltip
College Connections (Network View)

The contents of this view are controlled by the Selected Player from the Bubble Chart, which is a unidirectional interaction between the two views, which acts as a sort of query. After having a player selected, we have to derive data from our dataset to identify the possible links between the selected player (source) and every player that attended the same college (target).

We then create nodes and links based off of our original dataset (identify player info, e.g. name, etc.) and derived data (links, source and targets). This was done as part of our drilling down of data to concentrate on the NBA journey of a single selected player (as mentioned in our M1 proposal).

![College Connection](image)

**Figure CC-1: Network View**

In this view, we created a network (because we want to identify relationships, so it is a sensible idiom to follow) that used **point marks** (nodes/players) and **connection marks** for the link between a selected player and who went to the same college as them.
The point marks use two different channels: **color** (hue, categorical [cardinality of 23 but narrowed to 7]) to identify what position they play (see Figure BC-3 for legend), and **area** (2D size, quantitative) to encode how long their NBA was (i.e. the longer their career was, the larger the area; a **square root scale** was used to prevent exponential size increments).

Color was chosen as a channel for a similar reason it was used in the previous view, because it was the strongest channel we could use for a categorical attribute (player position). This is useful in identifying what kind of players were produced by this college (e.g. if a college produced mostly Forwards (F) historically for the NBA). The color palette used here is the same as the one used in **Bubble Chart** (please see previous section for discussion on rationale and design of it).

Area was chosen as a channel, because users can quickly identify which players had the longest careers in the NBA in comparison to others who attended the same college (human vision dependent on context). This is useful in identifying if there was a disparity in the quality of players that came out of a college; as a longer career in the NBA typically means a more prominent one. Each bubble also triggers a hover tooltip that displays how many years a player played in the NBA.

The connection marks also use a **color** channel (hue, categorical) to identify whether a player was born in the same state as the player at the center of the view (the **Selected Player** from the Bubble Chart). Color was chosen because it was the strongest channel we could use to encode a categorical attribute; it provides a quick and understandable way for users to identify the two possible relationships (with the help of a key/prompt) between the central node and its neighbors. In this case, there are only two possible colors:

- Gray (Not born in the same state as ‘**Selected Player**’)
- Blue (Born in the same state as ‘**Selected Player**’)
Figure CC-2: Closeup of color use in Connection Mark
The career map is focused on providing the user with information on how a NBA player moves throughout the world during their life. The state boundaries aren’t that relevant to the movement of the players because those borders are only political borders rather than borders that prevent them from moving around. What we focused on in the visualization is the relative movement between each stage of life of a player.

In this visualization, the location of the stages are position encoded on the map using point marks. The lines between the points encode temporal data, as in each segment of the line represents the ordinal order between each stage where the point at the arrowhead is more recent than the point at the start of the line.
When the mouse is hovering over an entry in the journey summary, the associated point mark will change hue to green to indicate which point the entry is associated with.
When the user hovers over a point on the map, a tooltip with additional information will appear and it will also highlight the selected point by changing the hue from grey to orange-yellow.
The user can also press the world or US button on the top for the zoom of the map to change between seeing only the United States and the world map.

This view’s selected player is linked to the bubble chart. When a player is selected, that player’s journey through the NBA will be displayed on this visualization. When they unselect a player, the visualization will go blank.
Credits

Cartogram (Tony):

- To create the legend, I used the d3-legend package from Susie Lu.
- Button styles from W3Schools
  - Minor tweaks to match the visual design

Cartogram (Jeremy):

- To create the bubble chart, we took inspiration from this tutorial

Cartogram (Network View):

- To create the network, we took inspiration from the D3 tutorial provided to us by the course (Advanced Concepts) that can be found here, particularly this example

Career Map (Matthew):

- To figure out how to initially draw a map for Career Map, I used the tutorial from class. That gave me the background on how to use topojson and display the world map. Once I got the world map up, I added my marks on top of the map using the join call.
- To figure out how to convert an XMLHttpRequest into a promise, I had to look it up here (How do I promisify native XHR?). It allowed me to use promiseAll to wait for all of the HTTP requests to complete before appending them all to the same file.
- Moreover, I had to look up how to read a CSV file, so that I can parse through the rows of the joined data and query the Google Geocoding API for the location (Parsing a CSV file using NodeJS).
Reflection

Our design hasn’t changed from our proposed design, although we had to add some limitations to our initial vision. Due to the size of our data, the visualizations get very laggy when we have so many elements being visualized and filtered. Due to that performance limitation, we decided to only allow one player to be selected at a time, so the journeys of multiple players cannot be compared at the same time.

After finishing the initial MVP, we found that it would be very difficult to do accurate statistical analysis using areas of a circle. Although outliers will be easy to distinguish, the relative performance between players will be harder to discern. This led us to rethink how our visualization should be used. As stated earlier, we found that although professionals may not find this information useful, casual fans may be more interested in the outliers.

If we were given the chance, we would organize our data in ways that would work with our visualizations better. Right now, our data is just a large joined table. For example, in the career map, where we show the player’s entire career, the data doesn’t explicitly show anything for their hometown or college. This data is joined with the team data, which means that accessing the hometown or college data requires us to find any one entry in the team data and find the relevant information from there.

Another feature that would have been a neat addition is listing all the teammates of a selected player during their career. Our visualization is lacking a view that models the relationship between a player and the organizations they have played for.

During the last phase of implementation, it became very difficult to style between the visualizations due to the inconsistencies in the use of inline styles through JavaScript versus CSS. This resulted in searing through the code to see how styling is applied. D3 also doesn’t provide an intuitive way to create usable components compared to other JavaScript frameworks, which meant that modifying the markup or styling in a component often required modifying several files.
Management Plan

Work Breakdown

MVP Phase

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>Description</th>
<th>Time Planned</th>
<th>Time Actual</th>
<th>Status</th>
<th>Team Member</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geocoding</td>
<td>Write a function that takes in a dataset without lat and long in all their locations that returns a dataset that includes lat and long data</td>
<td>3 hr x 1 person</td>
<td>5 hrs</td>
<td>Completed</td>
<td>Matthew</td>
</tr>
<tr>
<td>Base Layout</td>
<td>Making the initial HTML page with placeholders for the visualizations</td>
<td>1 hr x 1 person</td>
<td>1 hr</td>
<td>Completed</td>
<td>Tony</td>
</tr>
<tr>
<td>Data filtering/preprocessing</td>
<td>Filtering the data and preprocessing the data so that the visualizations have the data they need</td>
<td>3 hr x 1 person</td>
<td>2 hrs</td>
<td>Completed</td>
<td>Matthew</td>
</tr>
<tr>
<td>Base Map (4th Vis)</td>
<td>Adding a map of the United States to the visualization and setting up the base D3 class for the map visualization</td>
<td>2 hr x 1 person</td>
<td>1 hrs</td>
<td>Completed</td>
<td>Matthew</td>
</tr>
<tr>
<td>--------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>----------------</td>
<td>-------</td>
<td>-----------</td>
<td>---------</td>
</tr>
<tr>
<td>Visualizing Player career (4th vis)</td>
<td>Adding points and lines of each player on the map where points represent where a player’s home (team) was throughout their career and also their birth place and lines represent the moves they have made</td>
<td>6 hr x 2 people</td>
<td>6 hrs</td>
<td>Completed</td>
<td>Matthew</td>
</tr>
<tr>
<td>State Player Visualization (1st vis)</td>
<td>Visualizing how many current NBA player there are per state</td>
<td>4 hr x 2 person</td>
<td>8 hrs</td>
<td>Completed</td>
<td>Tony</td>
</tr>
<tr>
<td>Visualizing player Statistics - Bubble Chart (2nd vis)</td>
<td>Adding a visualization of all the players in the states.</td>
<td>4 hr x 2 people</td>
<td>10 hrs</td>
<td>Completed</td>
<td>Jeremy</td>
</tr>
<tr>
<td>Task Description</td>
<td>Task Description</td>
<td>Duration</td>
<td>Time</td>
<td>Status</td>
<td>Responsible(s)</td>
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<td>----------------</td>
</tr>
<tr>
<td>Visualizing college connections (3rd vis)</td>
<td>Visualizing the number of players who went to the same college as the player</td>
<td>5 hrs x 1 person</td>
<td>5 hrs</td>
<td>Completed</td>
<td>Jeremy</td>
</tr>
<tr>
<td>Adding timeline</td>
<td>Adding a filter that filters the data by time</td>
<td>3 hr x 1 person</td>
<td>3 hrs</td>
<td>Completed</td>
<td>Tony</td>
</tr>
<tr>
<td>Linking the hovered object on all views</td>
<td>Highlighting the relevant data in other visualizations when a data object is hovered on</td>
<td>3 hr x 3 person</td>
<td>6 hrs</td>
<td>Completed</td>
<td>Tony, Jeremy, Matthew</td>
</tr>
<tr>
<td>Adding filters for selected data</td>
<td>Adding a filter in all the other visualizations for when data is selected in one of the views (Year, State, Player)</td>
<td>2 hr x 1 person</td>
<td>2 hrs</td>
<td>Completed</td>
<td>Tony, Jeremy</td>
</tr>
<tr>
<td>Tooltip</td>
<td>Adding a relevant tooltip to every visualization</td>
<td>2 hr x 1 person</td>
<td>2 hrs</td>
<td>Completed</td>
<td>Tony</td>
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</table>
## Finalization Phase

<table>
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<tr>
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<th>Description</th>
<th>Time</th>
<th>Time Actual</th>
<th>Status</th>
<th>Team Member</th>
</tr>
</thead>
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<tr>
<td>Update bubble chart statistics select field</td>
<td>Reduce the number of statistics in the dropdown to improve usability and better support the task</td>
<td>1 hr x 1 person</td>
<td>1 hr</td>
<td>Completed</td>
<td>Jeremy</td>
</tr>
<tr>
<td>Group international players</td>
<td>Group all foreign players into an object and share data between views</td>
<td>2 hr x 1 person</td>
<td>1 hr</td>
<td>Completed</td>
<td>Tony</td>
</tr>
<tr>
<td>Task Description</td>
<td>Details</td>
<td>Hours</td>
<td>Status</td>
<td>Assignee</td>
<td></td>
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<td>---------</td>
<td>-------</td>
<td>-------</td>
<td>----------</td>
<td></td>
</tr>
<tr>
<td>Standardize component styles</td>
<td>Make the UI components (tooltips, buttons, select fields) consistent across all the views</td>
<td>4 hr x 2 people</td>
<td>Completed</td>
<td>Tony</td>
<td></td>
</tr>
<tr>
<td>Address occlusion with career map</td>
<td>Develop a solution for making the making points not occluding with each other</td>
<td>2 hr x 1 person</td>
<td>2 hr</td>
<td>Completed</td>
<td>Matthew</td>
</tr>
<tr>
<td>Add a list of destinations in career to career map</td>
<td>Add a text list to support the career map</td>
<td>2 hr x 1 person</td>
<td>6 hr</td>
<td>Completed</td>
<td>Matthew</td>
</tr>
<tr>
<td>Add legend to career map</td>
<td>Add missing legend to map</td>
<td>1 hr x 1 person</td>
<td>0 hr</td>
<td>Not done because removed colour encoding</td>
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</tr>
<tr>
<td>Task Description</td>
<td>Description</td>
<td>Time</td>
<td>Status</td>
<td>Assignee</td>
<td></td>
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<td>-----------------------------------------------------------------------------</td>
<td>-------</td>
<td>-----------------------------</td>
<td>----------</td>
<td></td>
</tr>
<tr>
<td>Polish the network graph</td>
<td>Explore ways to encode attributes that are not presently in in the visualization</td>
<td>3 hr x 1 person</td>
<td>6 hr</td>
<td>Completed (added color to connections and area scale for years in NBA)</td>
<td>Jeremy</td>
</tr>
<tr>
<td>Overall layout and styling</td>
<td>Implement visual style that supports that task</td>
<td>3 hr x 1 person</td>
<td>7 hours</td>
<td>Completed</td>
<td>Tony</td>
</tr>
<tr>
<td>Polish and Testing</td>
<td>Polishing and testing the implementation for corner cases, and odd visual bugs. The aim of this last bit of time is to ensure that the quality of the product is as professional as possible.</td>
<td>10 hr x 3 people</td>
<td>30 hrs</td>
<td>Completed</td>
<td>Matthew Jeremy Tony</td>
</tr>
</tbody>
</table>