

NBAology-ER Design

Table Set Up

- main table derived from CSV data called nba_full_table
- players, teams, and attributes tables are derived from main table and have calculated columns added

attributes_table

```
INSERT INTO attributes_table ( id, overall, play1, shot_close, shot_mid,shot_3pt, free_throw, offensive_consistency, driving_layup, driving_dunk, post_moves, speed, vertical, strength, stamina, hustle, ball_handle, passing_accuracy, interior_defense, perimeter_defense, steal, block, defensive_consistency, offensive_rebound, defensive_rebound, offensive_overall, defensive_overall)
```

```
SELECT
```

```
id, overall, play1, shot_close, shot_mid, shot_3pt, free_throw, offensive_consistency, driving_layup, driving_dunk, post_moves, speed, vertical, strength, stamina, hustle, ball_handle, passing_accuracy, interior_defense, perimeter_defense, steal, block, defensive_consistency, offensive_rebound, defensive_rebound,
```

```
(shot_close + shot_mid + free_throw + offensive_consistency + driving_layup + driving_dunk + post_moves + ball_handle + passing_accuracy + offensive_rebound) / 10 as offensive_overall,
```

```
(interior_defense + perimeter_defense + steal + block + defensive_consistency+ defensive_rebound) / 6 as defensive_overall
```

```
FROM nba_full_table
```

players_table

```
INSERT INTO players_table (id, name, team, position, height)
```

```
SELECT id, name, team, position, height
```

```
FROM nba_full_table
```

- ER diagram utilizes concepts of a relational mySQL database with NoSQL/MongoDB
- the 4 tables/ entities are player, awards, teams, calculated scores
- calculated scores table will be a mongoDB collection calculated using data from the NBA2k data set that will give offensive and defensive scores based on our design team's metrics
- First query utilize graph relations to filter all players matched by similar team, position, and go-to play entities
- second query compare offensive and defensive scores to player being searched for
 - this reduces the run time as comparisons to players of different positions and play styles will be eliminated
- third query compare awards won

