BEYOND THE NUMBERS: A VISUAL DISPLAY OF ADVANCED NBA DEFENSIVE ANALYTICS

CSE 6242: DATA & VISUAL ANALYTICS

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WHAT IS THE GOAL & HOW IS IT DONE TODAY

Goal

- Build an NBA defensive Analytics Dashboard
- Interactive & Visual assessment of defensive performance
- Ability to view the metric by player and/or team

How It's Done Today

- Limited to pure box-score numbers (rebounding, blocks, steals)
- Tabular format
- Few reliable "advanced-stats" that focus on defense
- FiveThitryEigtht – RAPTOR [3]

| Basic Box Score Stats | | | | | | | | | | | | | | | | | | | |
MP	FG	FGA	FG%	3P	3PA	3P%	FT	FTA	FT%	ORB	DRB	TRB	AST	STL	BLK	TOV	PF	PTS	+/-
38:22	10	17	.588	3	7	.429	0	0		2	5	7	15	0	1	5	0	23	+21
33:43	5	18	.278	2	7	.286	5	5	1.000	0	4	4	5	2	0	3	2	17	+14
33:09	13	20	.650	1	1	1.000	1	6	.167	6	1	7	2	0	1	1	1	28	+20
27:03	1	6	.167	0	3	.000	0	0		1	5	6	9	4	0	2	2	2	+8
24:04	3	4	.750	0	0		0	1	.000	2	9	11	1	0	1	0	1	6	+13

https://www.basketball-reference.com/boxscores/202002230GSW.html

OUR APPROACH & WHY IT WORKS

- GRANULAR AND ROBUST DATASET

- INTERACTIVE VISUALIZATIONS THAT THE AUDIENCE CAN EXPLORE

- DOESN'T RELY ON ANALYZING WIDE TABULAR DATA

- USE DATA VISUALIZATION BEST PRACTICES (*PRACTICAL TABLEAU & VISUALIZE THIS*) [11] [12]

LeBron James
2/12/2020
+7.6

WHO CARES AND WHAT'S THE IMPACT

- NBA fans world-wide

- Analytical fanbase that cares about Quantifying performance - *Sprawlball [18]*

- Insight for fans, websites, and blogs to reference

- Measured through website views and references

RISKS & PAYOFFS

Risks
- Scraping data from stats.nba.com
- Enough time for a credible analysis

Payoffs
- Meaningful defensive insight for the NBA community
- Websites and writers referencing our work
- Possible chance to show off our work to NBA teams

COST & TIMELINE

Cost

- Minimal cost to us (< $200)
- Daily Website hosting

Timeline

- Progress report (4 weeks)
    - Datasets scraped
    - Website template
    - Proof-of-concept visualizations
- Final (8 weeks)
    - Fully working website
    - Interactive dashboard with visualizations
    - Report Poster

CHECK-POINTS

1. Already Done
- Proposal
- Plan of action
- Literature survey

2. Progress Report (4 weeks)
- Datasets scraped
- Website template
- Proof-of-concept visualizations

3. Final
- Fully working website
- Interactive dashboard with visualizations
- Report Poster

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