

How does weather affect Major League Soccer Games?



**A data analytics capstone
for Nashville Software School**

Grady Robbins June 2020

Agenda

- ⚽ About Me
- ⚽ Disclaimer
- ⚽ Analysis
- ⚽ Lessons learned
- ⚽ Conclusions

⚽ About Me

- Nashville since 2018
- 3x Bootcamp graduate:
Data Analytics
Full Stack Web Development
US Navy
- Attended the World Cup
hosted by the USA 1994
- Eagerly await the tournament's
return to North America 2026;
Nashville is a candidate to host

gradyrobbins.github.io



Motivation: I grew up playing soccer in the deep south; the Gulf of Mexico is a few short miles from where this picture was taken.



Disclaimer

“All models are wrong, some are useful”

George Box

Data Challenges Discovered

Soccer: Major League Soccer has a 25 year history; this analysis covers 8 seasons

Weather: Soccer games average 2 hours; my analysis uses daily, not hourly precipitation measurements, observed at the nearest International Airport for the Home Team. For example: LA Galaxy > LAX.

 Analysis

Hypothesis - There will be more draws (ties) and fewer goals on game days with *any* precipitation.



FC Dallas vs. Houston Dynamo (Water Soccer)

Major League Soccer: Texas Derby June 2, 2016

These Rain Amount Guidelines are presented as a guide since many variables such as terrain, drainage and intensity vary.

1/100 (0.01) of an inch of rain – The first measurable amount of rainfall reported by The National Weather Service. This would not leave puddles on the ground and would slightly wet the surface. This might occur during a light shower for 2-5 minutes or even a drizzle for 2 hours.

1/10 (0.10) of an inch of rain – A light rain for 30-45 minutes, moderate rain for 10 minutes or heavy rain for 5 minutes. Small puddles would form but usually disappear after a short while.

1/4 (0.25) of an inch of rain – A light rain for 2-3 hours, moderate rain for 30-60 minutes or heavy rain for 15 minutes. There would be many puddles on the ground and they would not disappear easily.

1/2 (0.5) of an inch of rain – A light rain never reaches this amount, moderate rain for 1-2 hours or heavy rain for 30-45 minutes. There would be deep standing water and they would last for long periods of time.

3/4 (0.75) of an inch of rain – A light moderate rain never reaches this amount, heavy rain lasting for 2-4 hours. There would be deep standing water for long periods of time.

One (1.00) inch of rain – A light moderate rain never reaches this amount, heavy rain for several hours (2-5 hours). There would be deep standing water for long periods of time.



2.82

Avg Goals per Game



2.94



25%

Percentage of Games
to end as Draws



23%



Lessons Learned

- Tools are good
- Answers are better
- Teachers are best

Muchos Gracias: UrLeaka, Taylor, Matt, Mary

Cohort DA2E: Congratulations, ya'll!

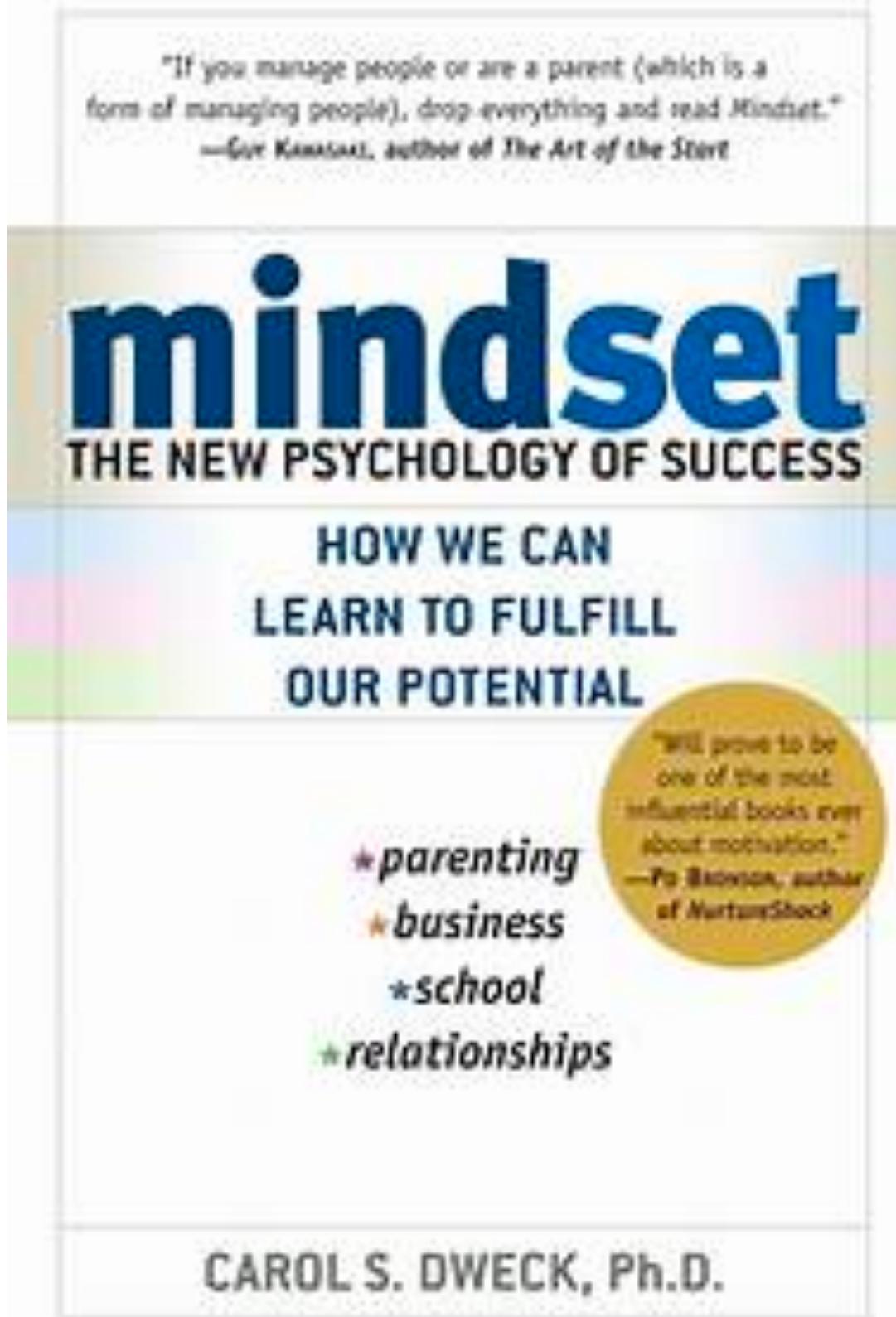
What title would you give this chapter of your life?



Conclusions

My hypothesis was only a starting point, and was not borne out by the data

What's next?



Next Book ^^



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Please welcome Elissa Newland as she shares her analysis of Vanderbilt University's Digital Asset Management