Sports Data Analysis

Week 1

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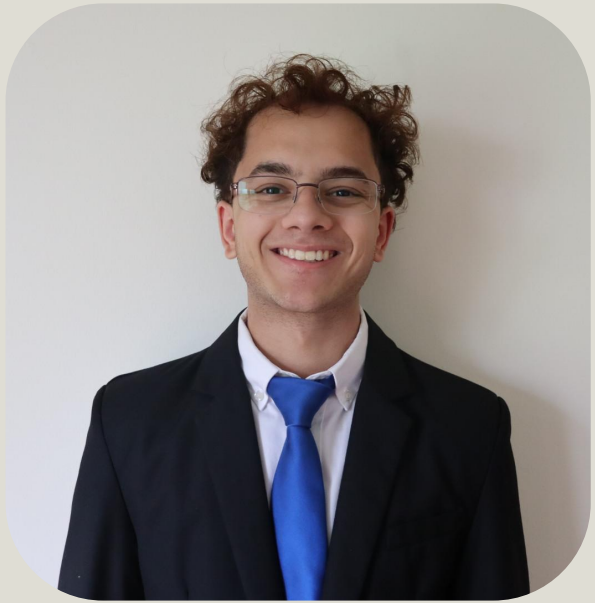

About me!

Name: Rahul Govil
Hometown: Rochester Hills, MI

- **Major:** 3rd Year Data Science in CoE
- **Classes Taken:** EECS 203, 280, 281, 445, 484, 492, 442; STATS 412, 413
- **Interests:** football, basketball, fantasy sports, music, video games, lifting
- **Teams:** All Detroit sports

Icebreaker

Everyone’s favorite part :)

Say:

- Name
- Year and Major
- Hometown
- Favorite sport and/or team/player

Sports Analytics

Main Ideas:

- Get sports data
- Clean it up
- Visualize it
- Model/Analyze it

Week	Agenda
1 (9/21)	Intros + Project Group Formation
2 (9/28)	Pandas/NumPy Review
3 (10/5)	Data Cleaning
-	Fall Break
4 (10/19)	Data visualization
5 (10/26)	Data visualization + watch party
6 (11/2)	Model Creation
7 (11/9)	Model Creation + watch party
8 (11/16)	Presentation Prep + watch party

Datasets

- 2022 World Cup
- 2024 MLB
- 2025 NFL Draft + Combine
- Caitlin Clark College
- Josh Allen 2024-25 (MVP Season)
- Lions 2024-25
- NHL 2024-25
- Pistons Year over Year
- UConn Men’s Basketball 2023-24
- Michigan Basketball 2024-25
- Michigan Football 2024-25

Want Other Data?

The internet's got everything! Only rule: has to be sports-related

Good sources:

- https://www.sports-reference.com/ (by far the best)
- fangraphs.com (just baseball)
- ESPN API
- Pro league APIs

Project Ideation

Split up by favorite sport: Football, Basketball, Soccer, etc (might need an “other” group)

With a few people in that group, **talk** through what question you’re interested in analyzing/modeling

Think About: What data do you need? What ideas/hypotheses do you have? Will you build a model for prediction or just analyze?

What do You Need to Do Today?

- **Do the basic python review:** https://github.com/MichiganDataScienceTeam/F25-SportsDataAnalysis/blob/main/Starter%20Code/pandas_numpy_michigan_football.ipynb
- **Figure out the dataset** you want to use and/or what (if any) outside data you want – data should be ready to go **in 2 weeks**
- Watch football and **socialize**!

Questions?