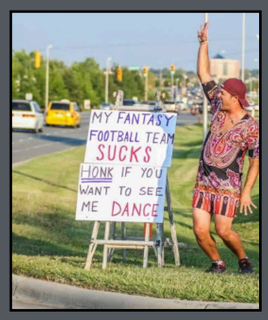
Top Statistics: Fantasy Football Running Backs

John Lemaster

Project Objectives

- Win fantasy football league
- Model and predict fantasy points earned by player
- Too many useless metrics & statistics
    - How to know which ones are reliable
    - Stop wasting money on bad stats
- Embarrassment of last place punishments



Player Focus

- Running Backs

    1. Less top tier 1 and tier 2 available to draft

    2. Prone to injuries

    3. Teams style of play

        - Running back by committee

        - More pass orientated offenses (majority teams > 62% passing)

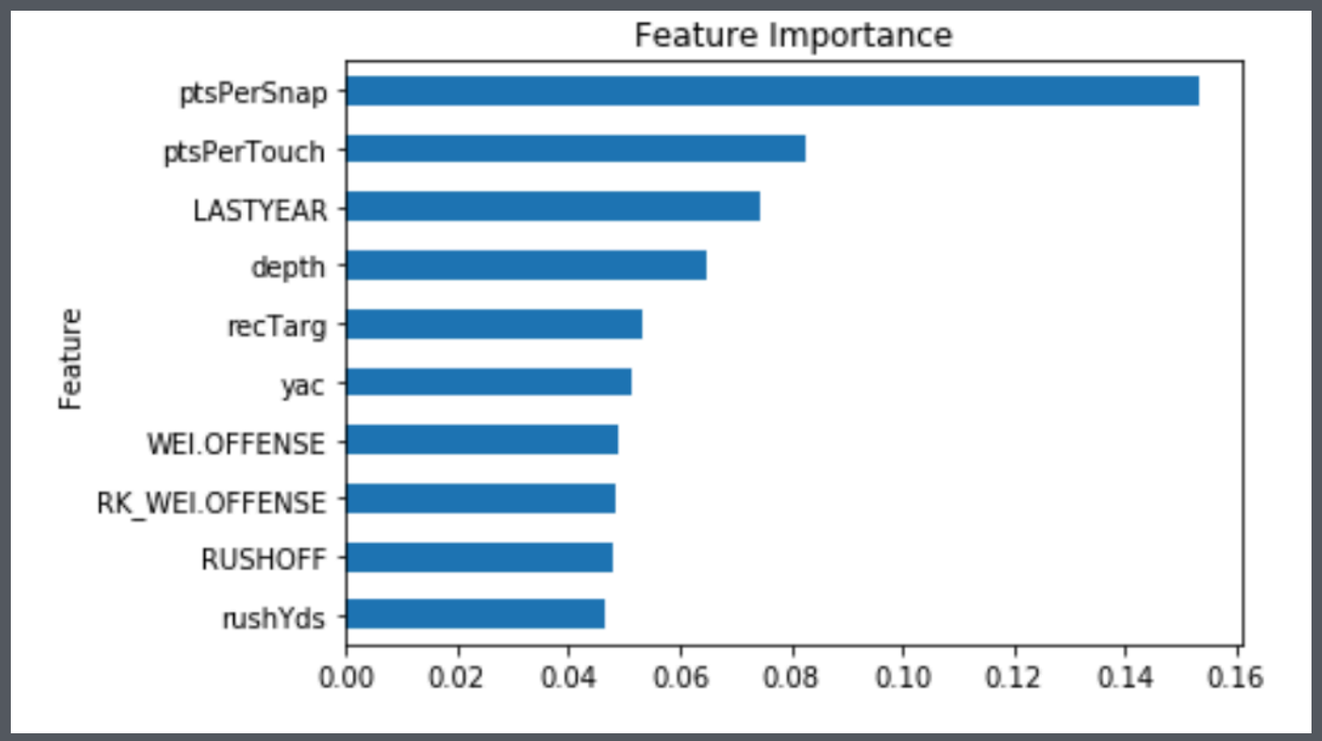
Methods

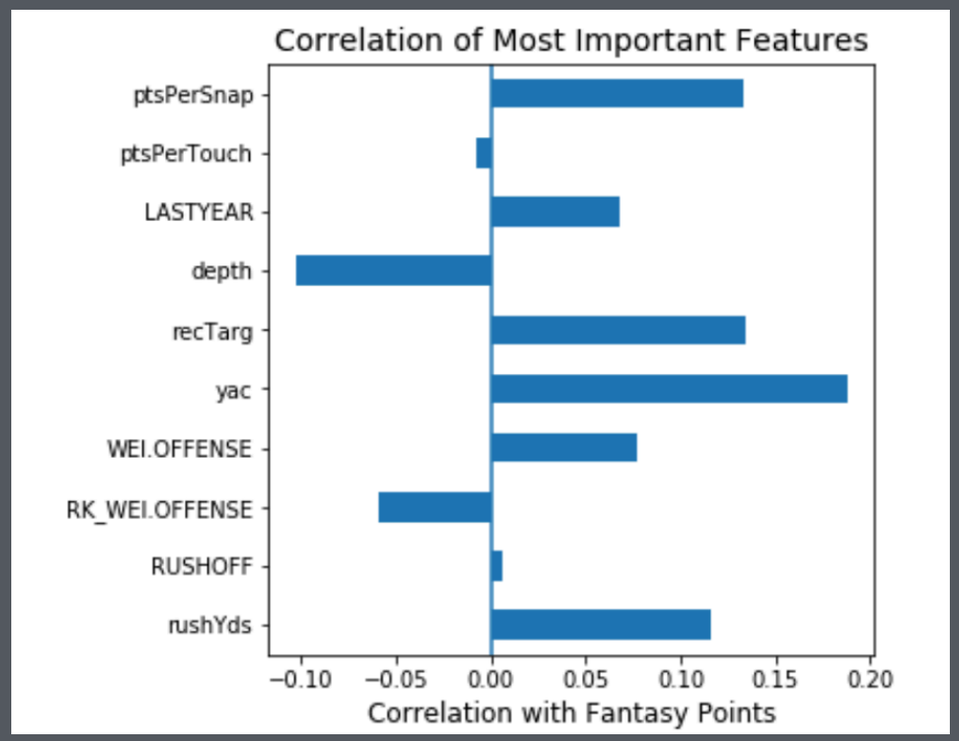
- Extracted from multiple data sources
    - Fantasy Football Outsiders (Team)
    - Pro Football Focus (Individual)
- Features & Targets
    - Started 70+ features → Ended with top 7 features
    - 2 buckets of low and high fantasy points for target
- 8 different models. Over 100 iterations

Model Results: Feature Importance

Decision Tree

Accuracy: 67%



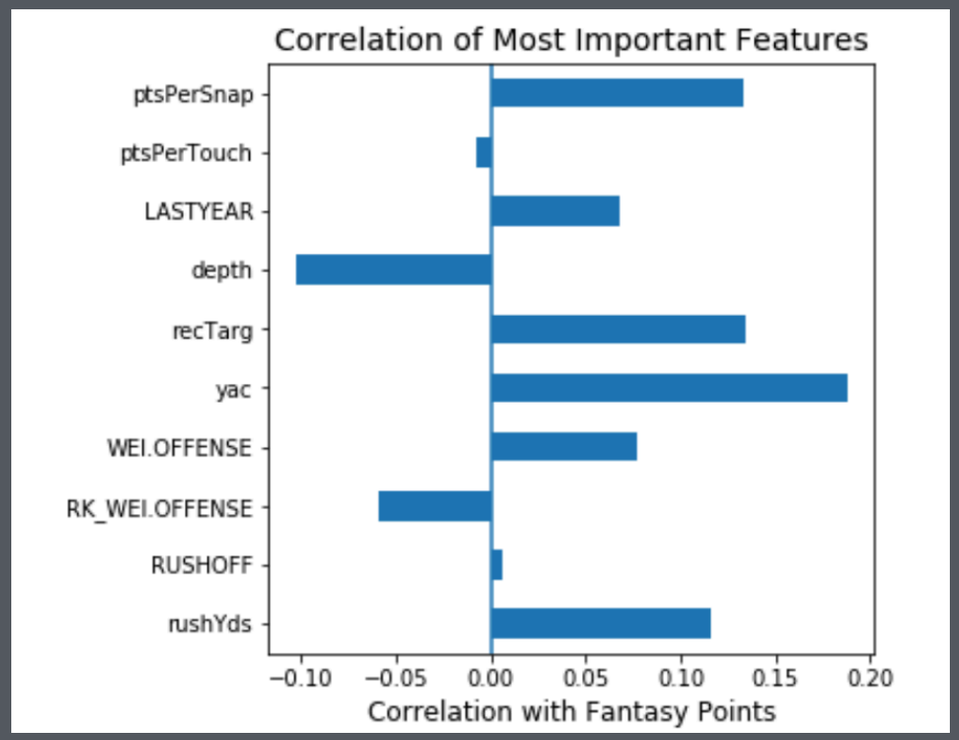


ptsPerSnap= points per snap l ptsPerTouch=points per touch l LASTYEAR=last year's offense depth=depth of passes l recTarg=receiving targets l yac=yards after contact WEI=weighted effectiveness of offense rush l RK_WEI OFFENSE=rank of weighted offense RUSHOFF=rushing offense effectiveness l rushYTds= total rushing yards

Counter-Intuitive Findings

Observations

- Both team and Individual performance matter
- Points per snap more relevant than points per touch
- Advance stats don’t matter as much



Recommendations

Running Backs

Statistics & metrics to target

1. Points per snap
2. Last year offense performance
3. Receiving targets
4. Weighted offense performance
5. Rushing yards

Less important

1. DVOA
2. Rush attempts > 40 yards
3. Tackles avoided
4. Points per touch
5. Reception data
6. Strength of Schedule

Future Work

- Add two new data sources
    1. PlayerProfiler data
        - Proprietary data observations
    2. Football Outsider offensive line effectiveness
- Try new models with new data:
    1. Wide receivers
    2. Quaterbacks

Thanks!