



**SPELL TRENDS**

# MTG PRICE PREDICTIONS

Presented by JD Mentz



# WHO AM I

- Data Scientist
- Life-Long Geek
- Numbers Fiend
- 9 years of MtG



# AGENDA

1 GOALS

2 DATA USED

3 DATA  
PREPARATION

4 MODELING

5 CONCLUSIONS

6 NEXT STEPS

# GOALS

## Predict Prices

- Investing
- Inform purchasing
- Spot Trends



# DATA SETS USED



## SCRYFALL BULK DATA

- Daily updates
- Every unique card (415580 entries)
- Contains Image Data



## MTGJSON - ALL CARDS

- Contains both IDs



## MTGJSON - ALL PRICES

- 90-day price data
- All card variations



## TCGPLAYER PRICES

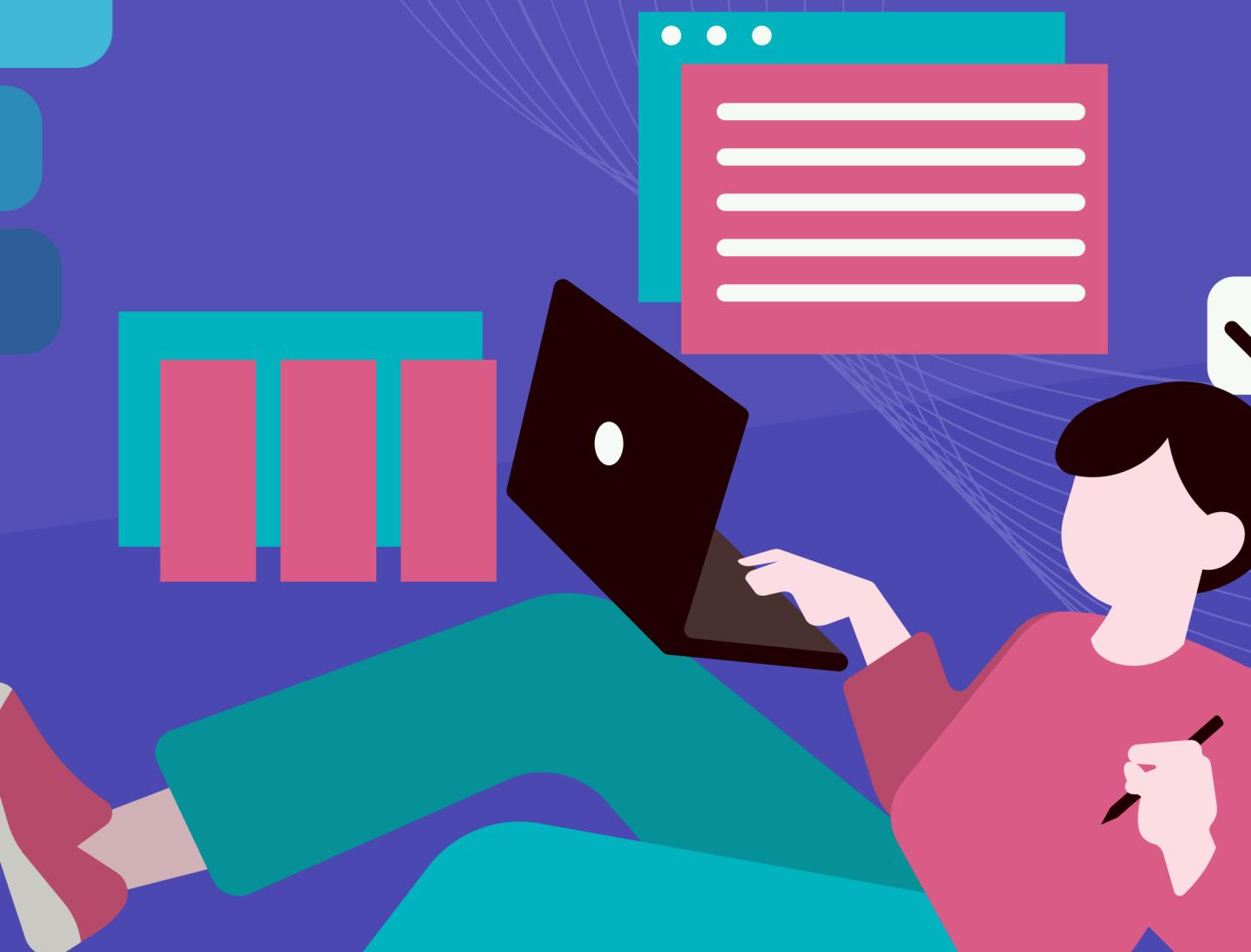
- Most popular MtG marketplace
- Reports market prices
- Contained in All Prices data



# DATA PREPARATION

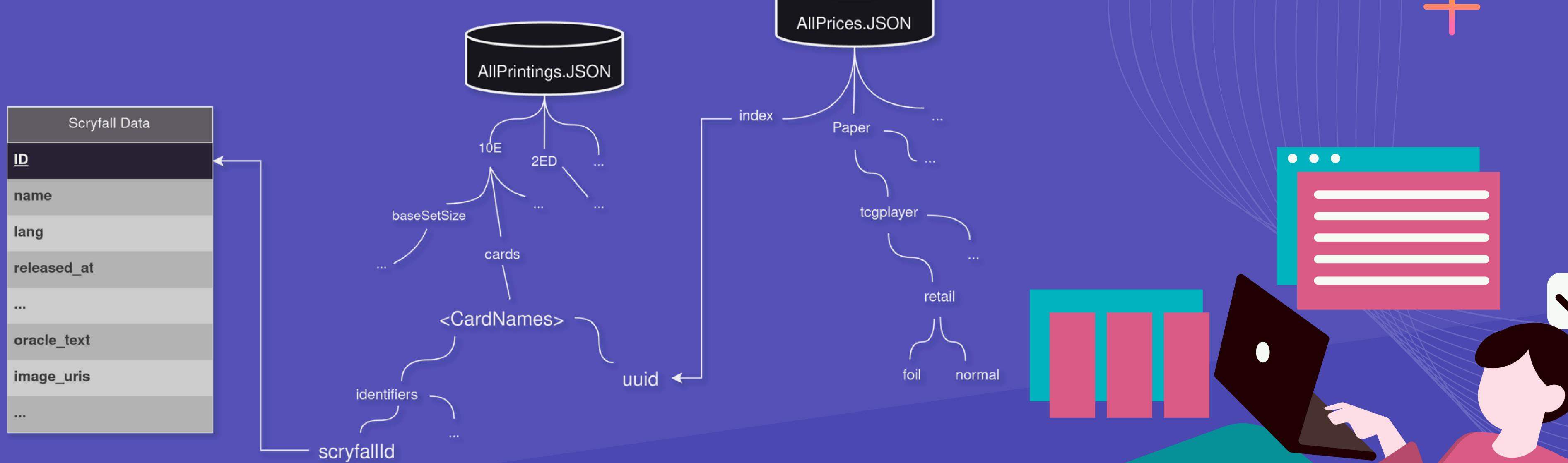
## Scryfall Data

Everything	415,580
English	80,033
Normal-Sized	79,470
Legal Game Pieces	77,435
Physical Cards	69,414
Regular Printings	67,533
Have Type(s)	67,520
Not Playtest	67,280



# DATA PREPARATION

## MtGJson Data



# DATA PREPARATION

## Text Processing

Asmoranomardicadaistinaculdacar

Flying



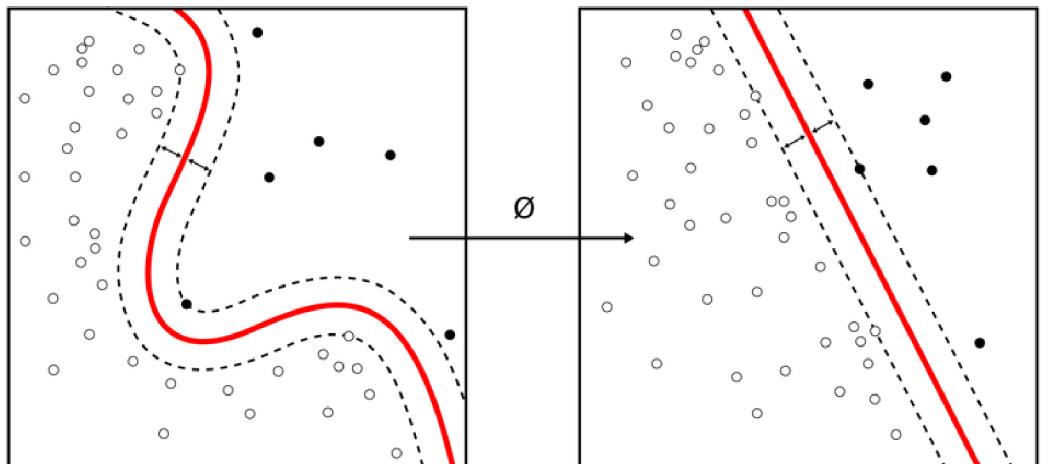
fly

Reduction + Consistency!

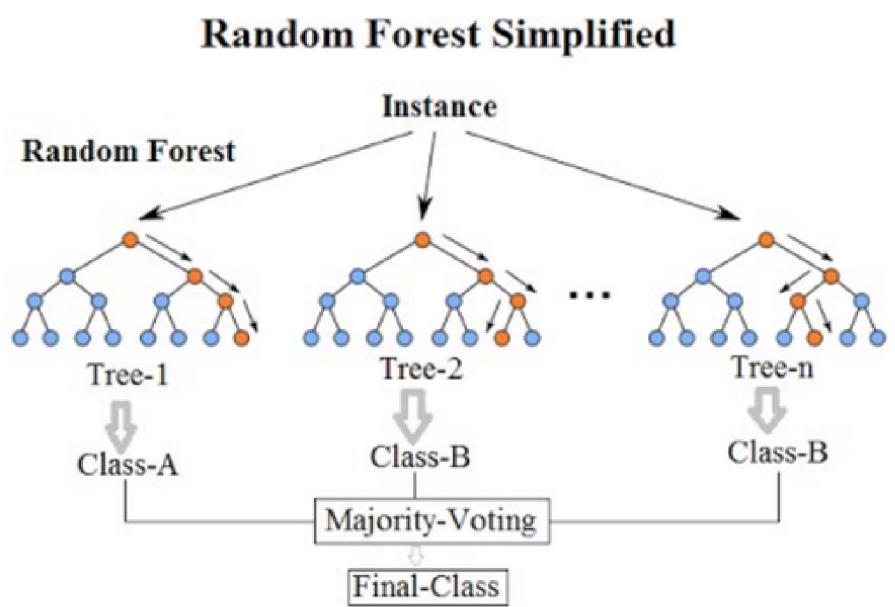


# MODELING

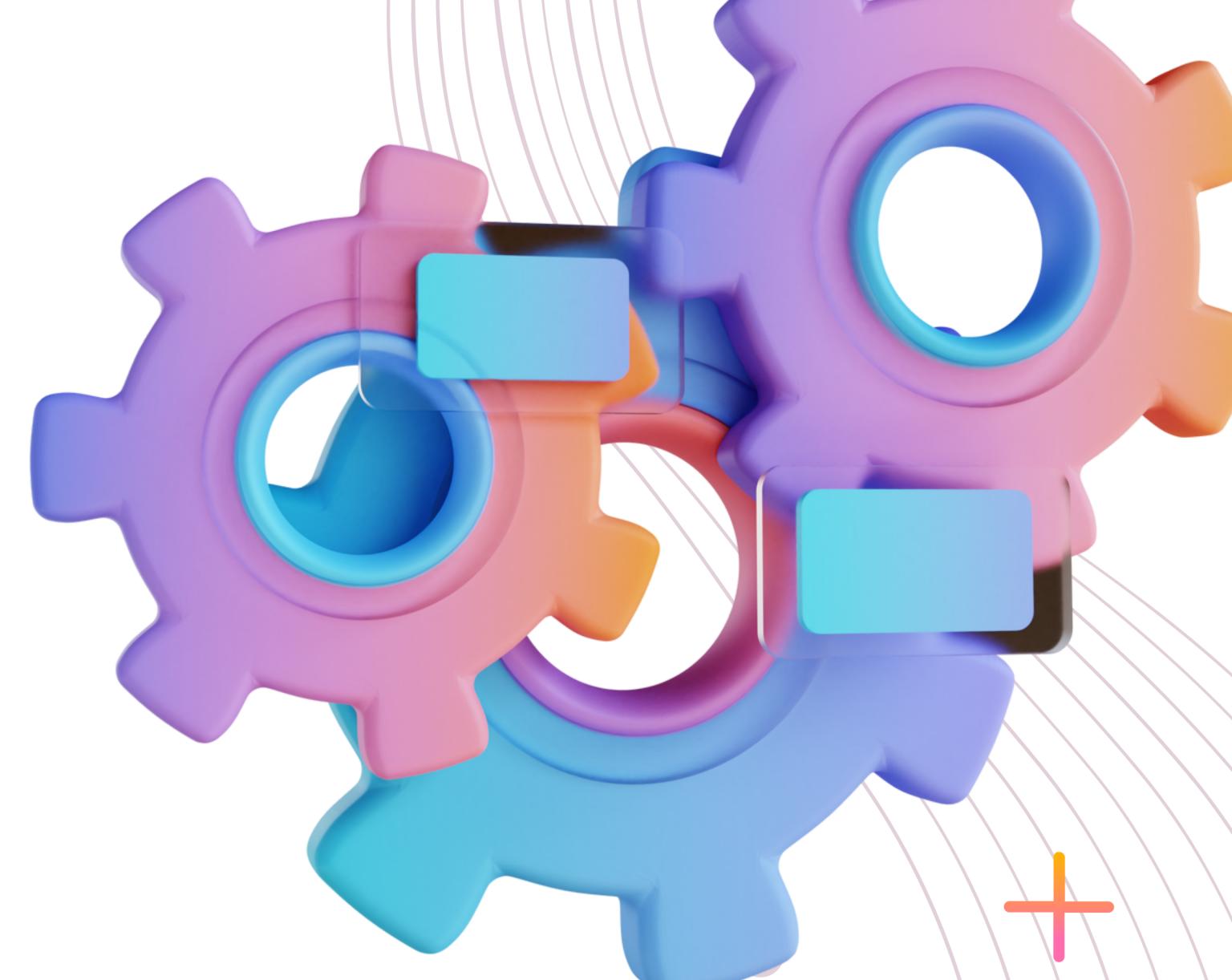
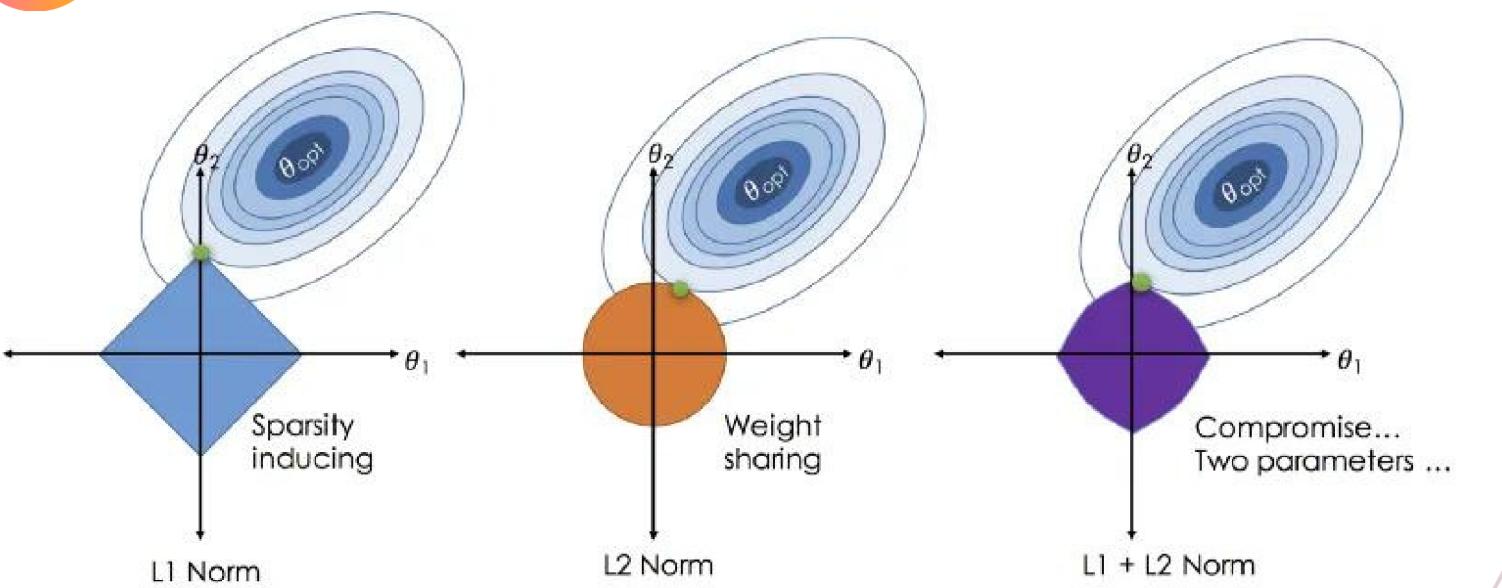
## GRADIENT BOOST



## RANDOM FOREST

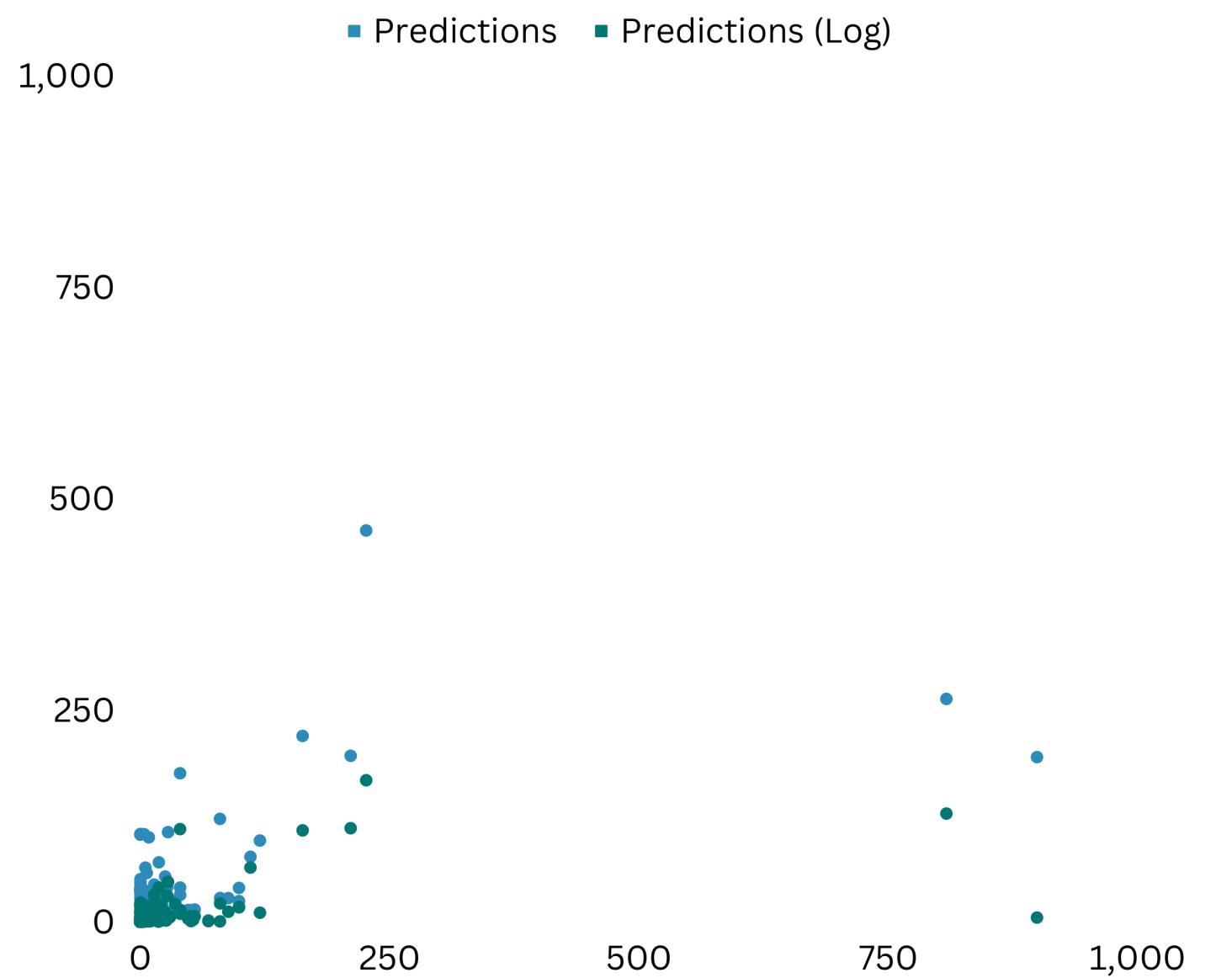


## ELASTIC NET

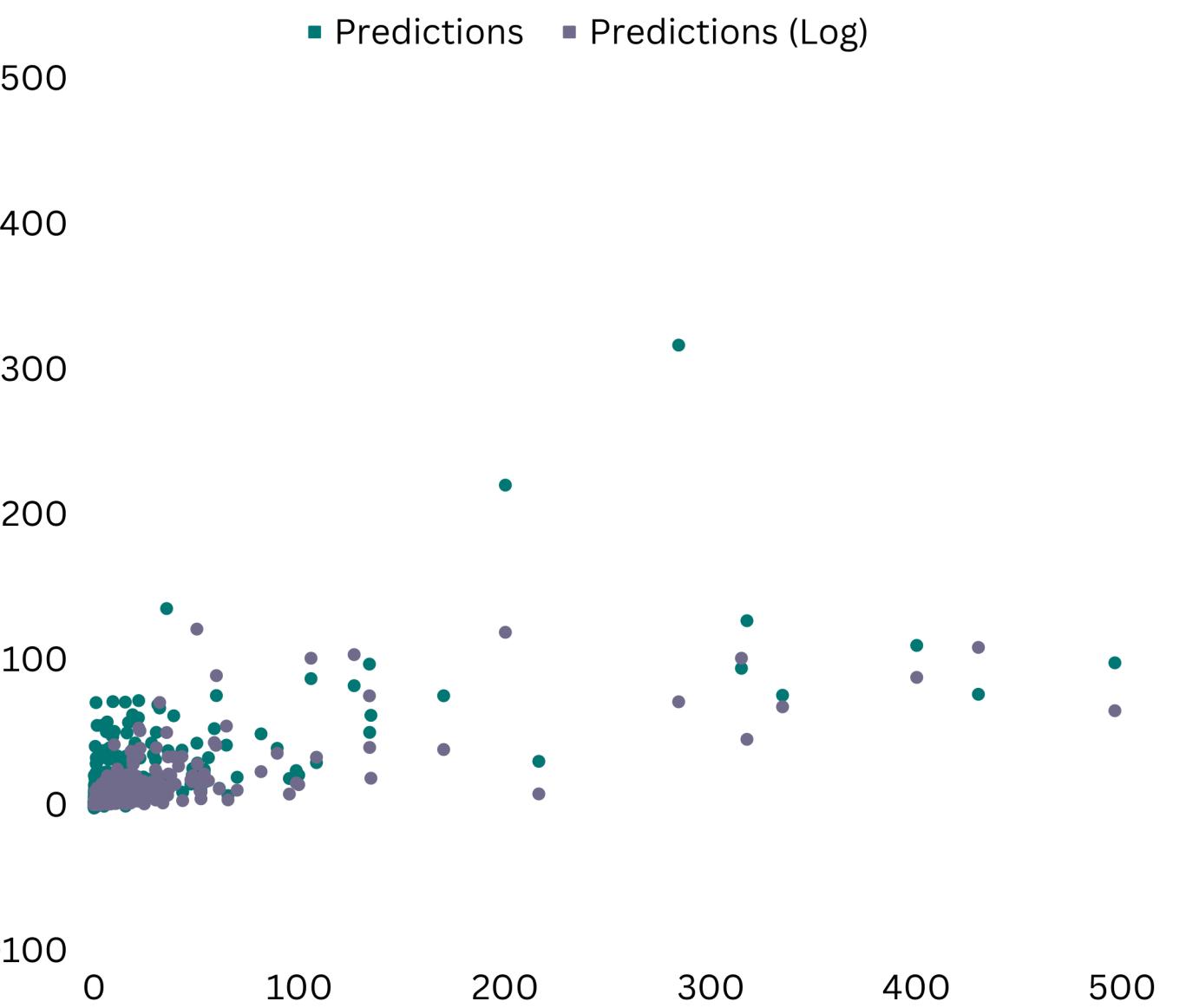


# MODELING

## Non-Foil Performance

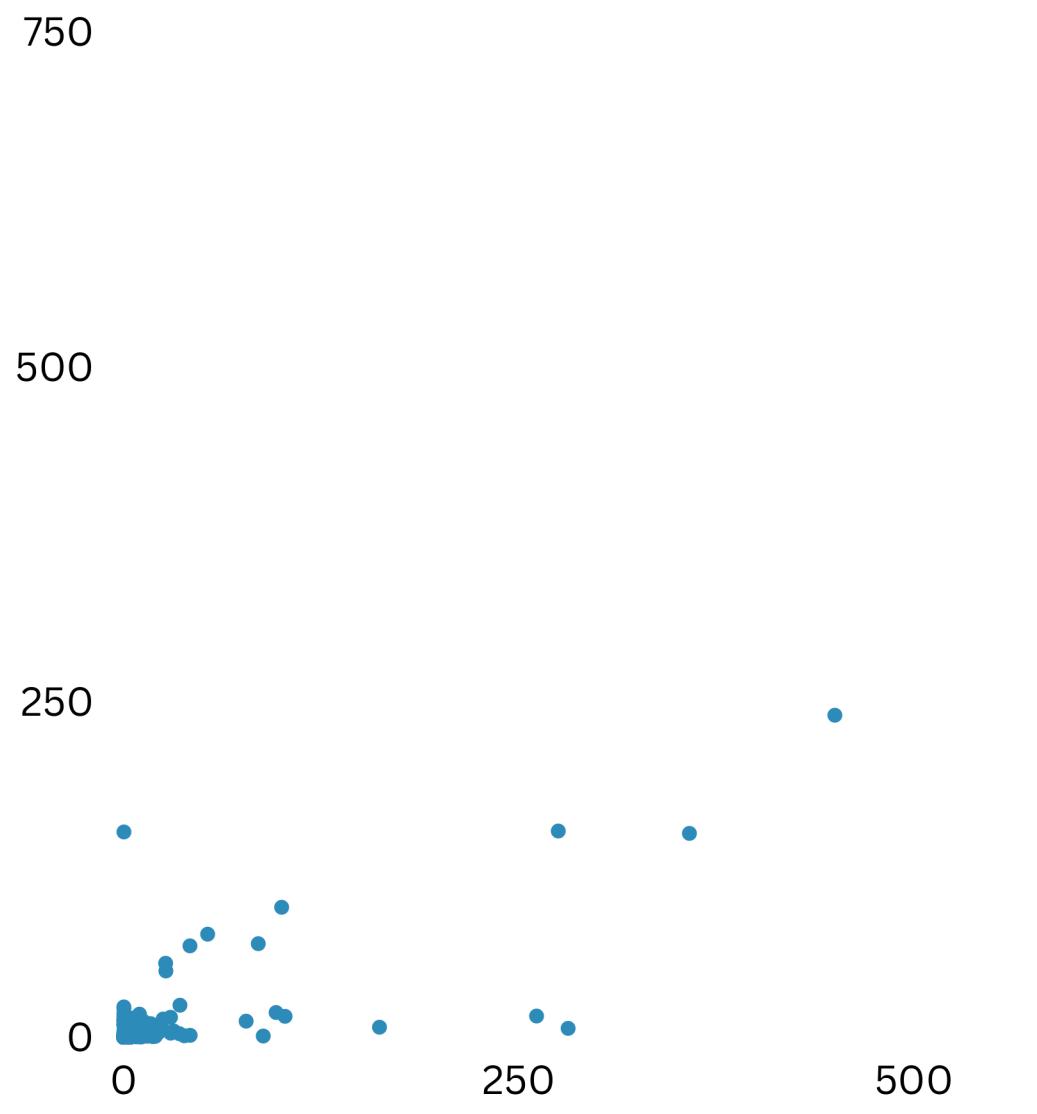


## Foil Performance

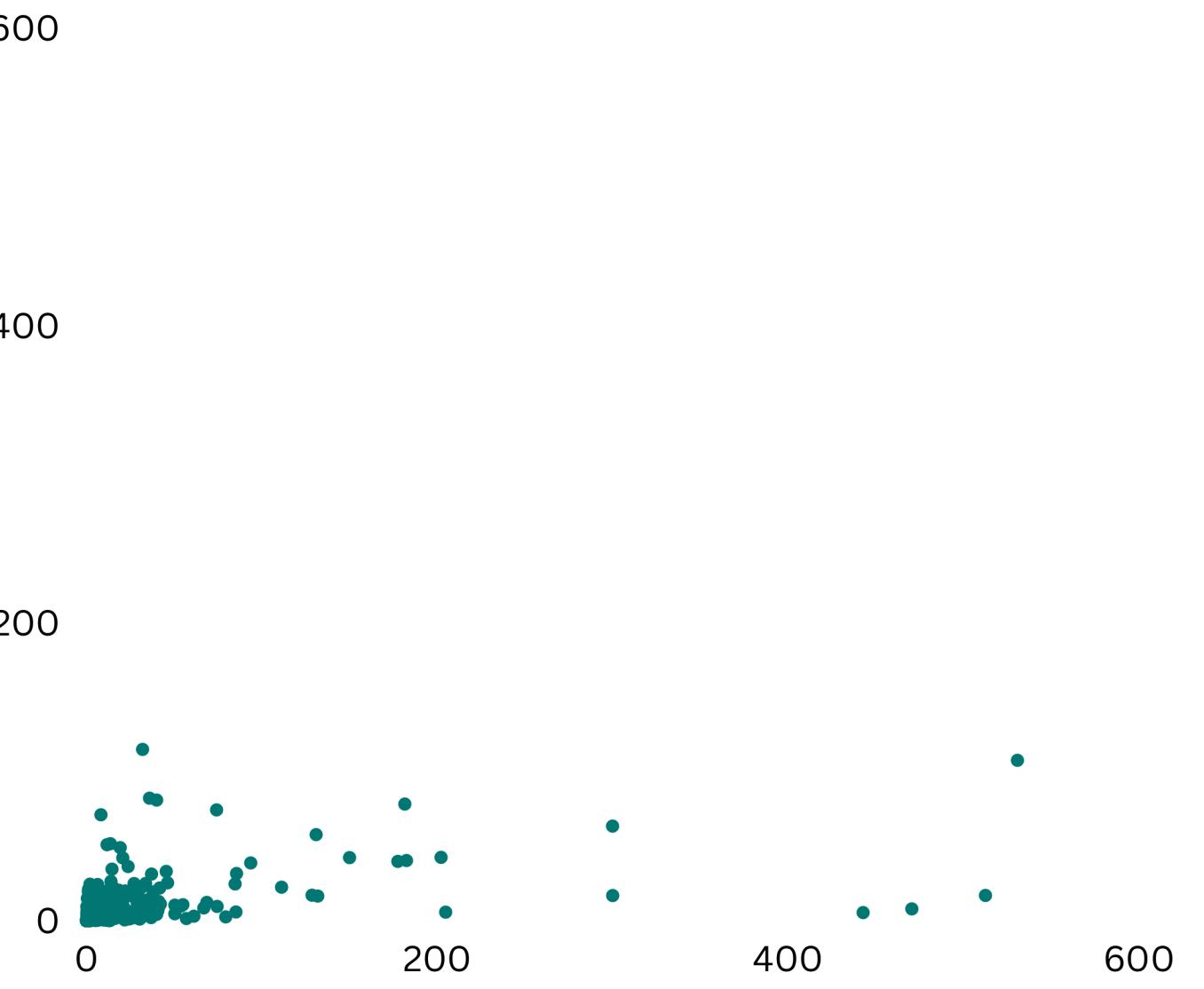


# MODELING

Non-Foil Testing Performance



Foil Testing Performance



# MODELING



<b>FINISH</b>	<b>% WITHIN \$1</b>
<b>NORMAL</b>	<b>75%</b>
<b>FOIL</b>	<b>52%</b>





# CONCLUSIONS

- Lots left to do!
- Provides insights
- Not yet ideal
- Genuinely Promising





# NEXT STEPS

- Do lots more!
- Model tweaking
- More Subsets
- Account for corner cases





# THANK YOU FOR LISTENING!

Don't Hesitate To Ask Any Questions



# THANK YOU

## Contact and Information:

- [github.com/ParkedHampster](https://github.com/ParkedHampster)
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## Repository:

- [github.com/ParkedHampster/Spell-Trends](https://github.com/ParkedHampster/Spell-Trends)

