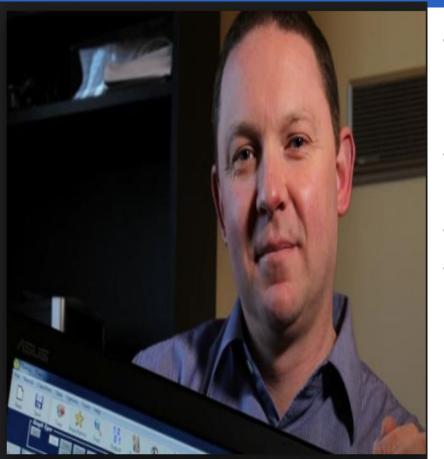
# Ensemble Models: Sports Analytics & Hedge Funds

### Acknowledgements First:

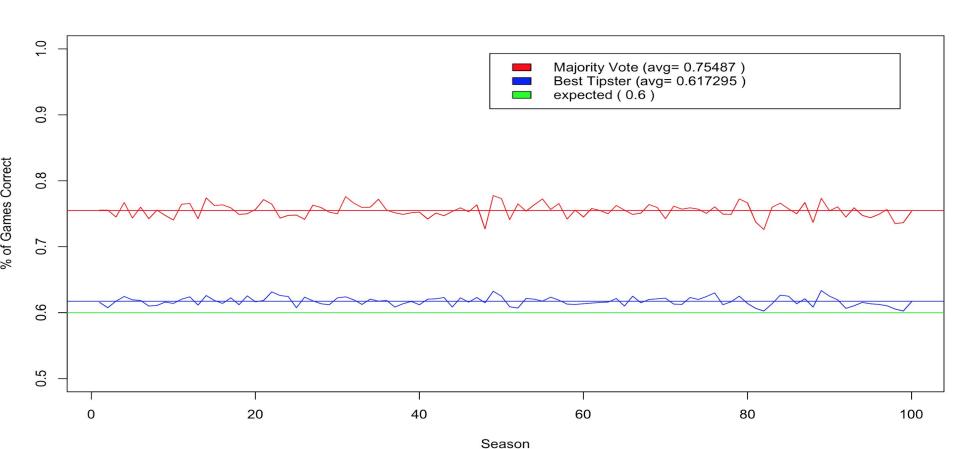


- Phil Brierley
  - How to Improve the accuracy of your predictive models
- First 3X winner Kaggle
  - ◆ 500k Heritage health prize
- Australia R Meetup Organizer
- Good at explaining complex concepts elegantly

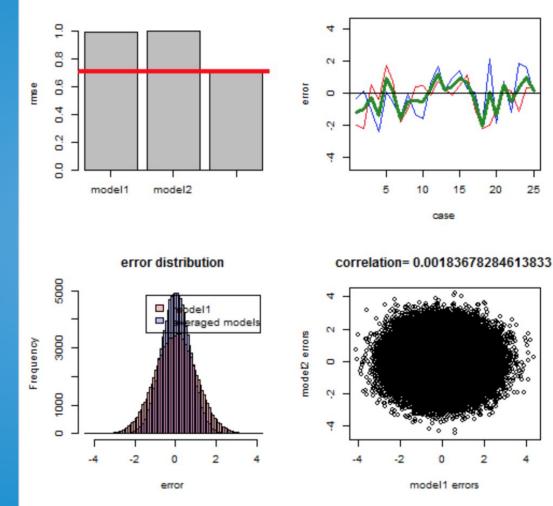
# How can you beat your friends in picking sports winners if you know nothing about sports?

# Let's look at a simulation for the answer: Improving the Accuracy of your Predictive Models Lets run the code / simulation Woot Woot!

## Simulated Sports Picking Strategy

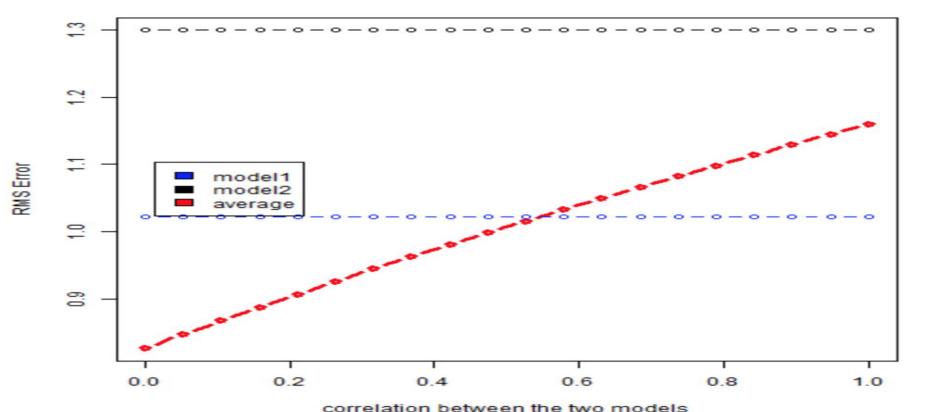


## Model Synergy

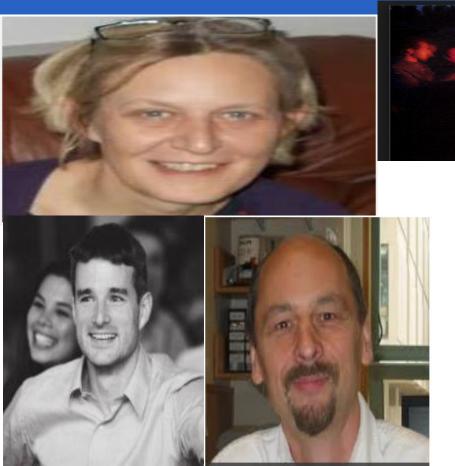


### Model Synergy Varying Correlation

The less correlated the two models, the more synergy when average



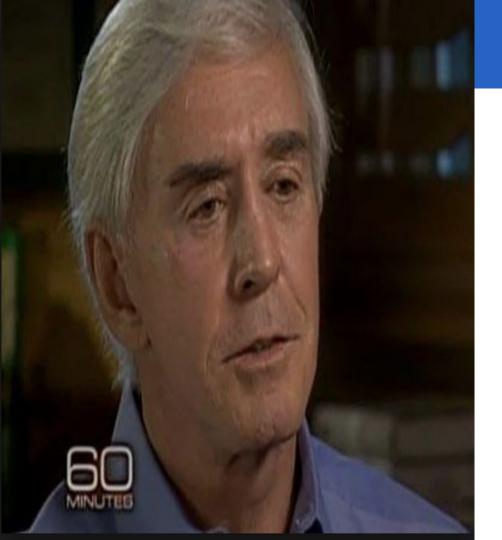
### Lessons from the Kaggle Trenches





- Amanda Schierz:
  - Checkout Amanda's <u>538 March</u> <u>Madness Piece</u>
- Zach Dean Mayer:
  - Check out Zach's <u>DataCamp</u>
    <u>Class</u>
- Sergey Yurgenson

# Didn't the title of the talk say something about sports analytics & hedge funds?



## **Interview**

- Note: I do not, repeat do not condone / endorse Billy Walters investment activity in any way
  - If you use inside information, you're an idiot



#### **James Simons**



- Renaissance Technologies
  - Interview
    - MIT Interview if you have some extra time

# Are Ensembles the best thing since?



# Are Ensembles the best thing since sliced bread?

- Netflix Case Study
- Increase in Complexity
  - Training Time
  - Interpretability
  - Prediction Latency
  - Code Fragility

# Are Ensembles the best thing since sliced bread?

Always Ask: What's the value added to complexity Ratio

Peter & I would like to thank Rob 'meta' Krzyzanowski



## Who said this quote?

"The Supreme Court of the US is basically an ensemble of nine different highly trained neural net models that run a binary classification of whether a problem is "constitutional" or "not constitutional".

