

# Ensemble Models: Sports Analytics & Hedge Funds

# Acknowledgements First:



- [Phil Brierly](#)
  - ◆ [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

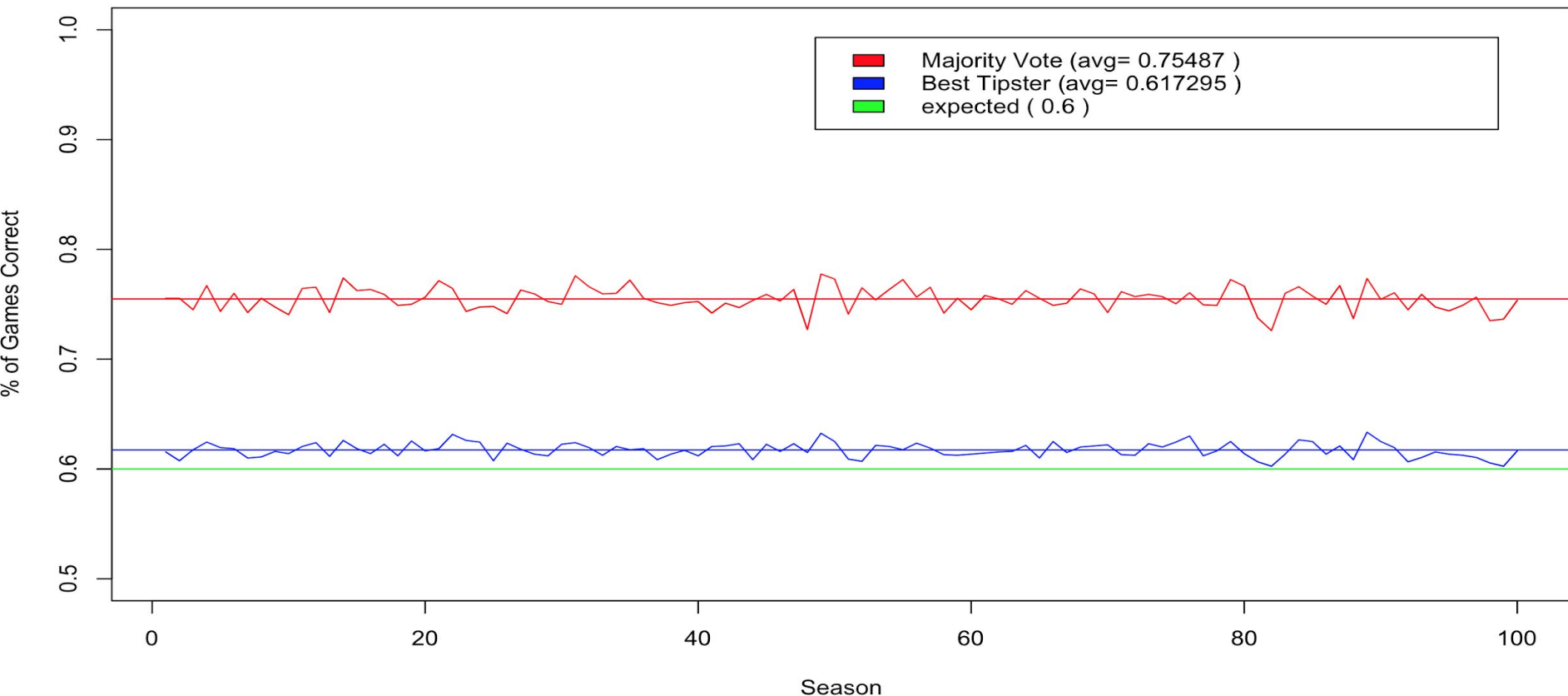
How can you beat your friends  
in picking sports winners if  
you know nothing about  
sports?

Let's look at a simulation for  
the answer:

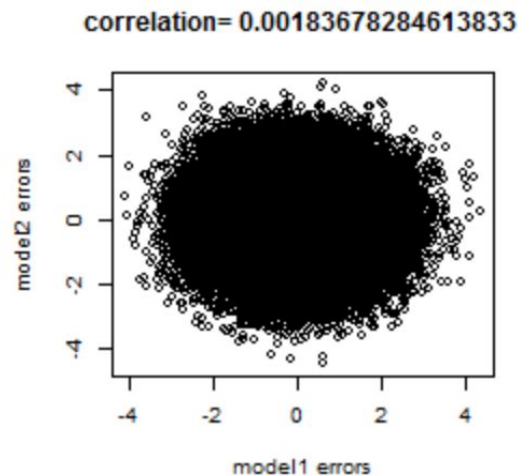
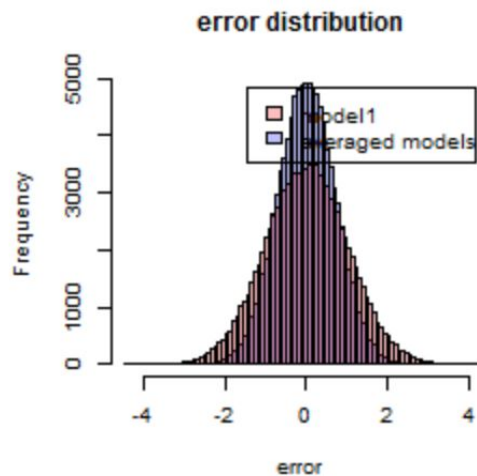
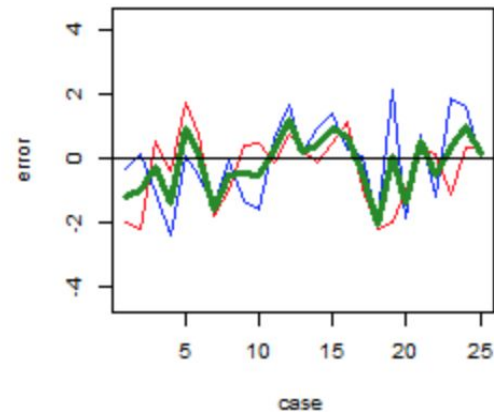
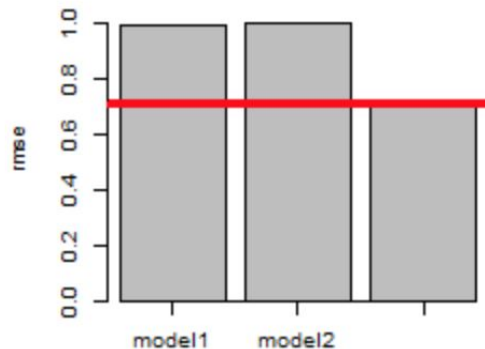
Improving the Accuracy of  
your Predictive Models

Lets run the code / simulation  
Woot Woot!

# Simulated Sports Picking Strategy

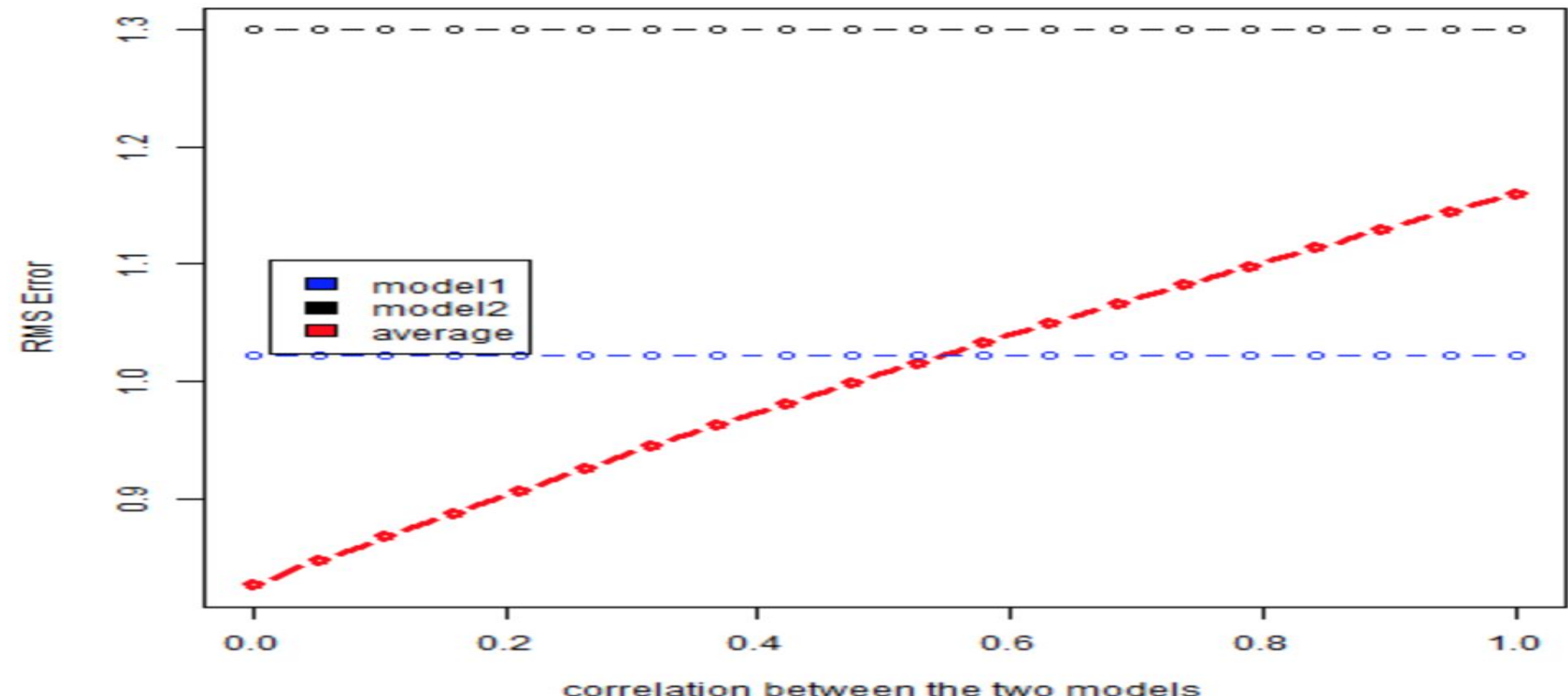


# Model Synergy



# Model Synergy Varying Correlation

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



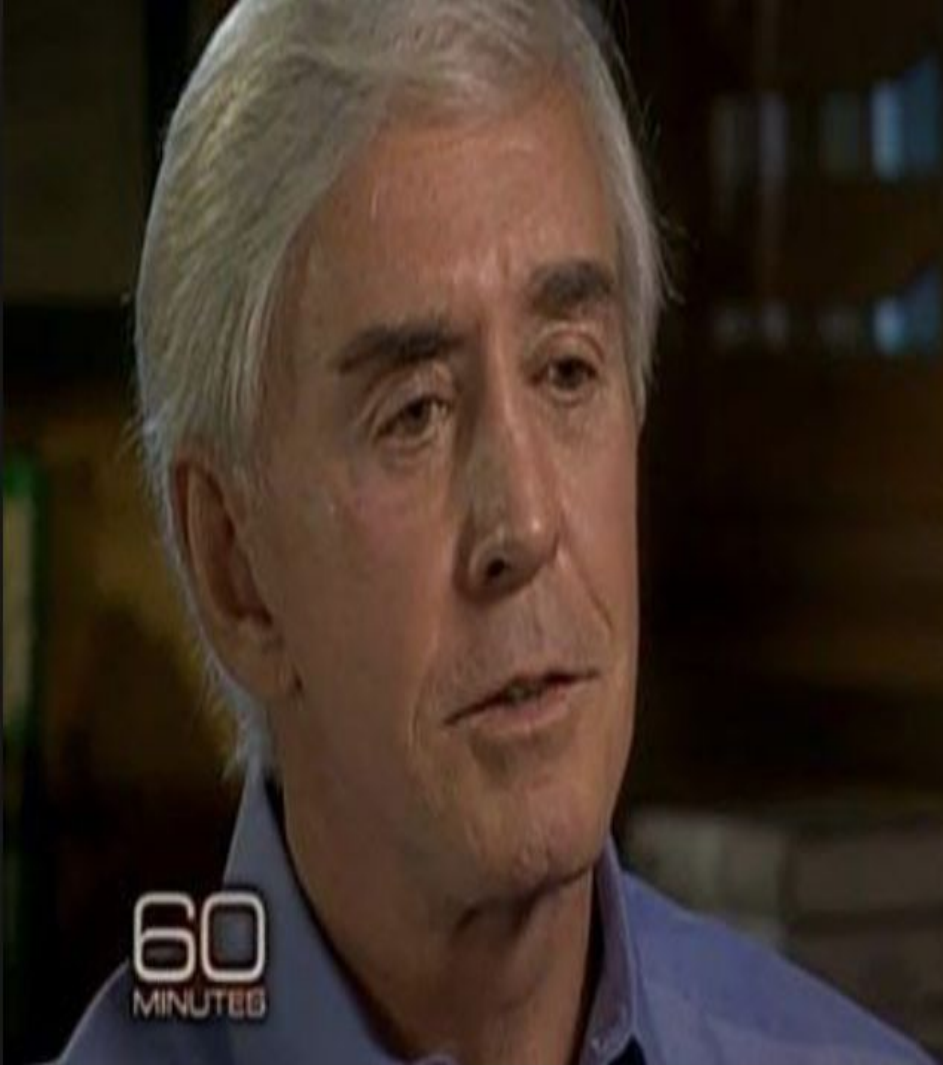
# Lessons from the Kaggle Trenches



- Amanda Schierz:
  - ◆ Checkout Amanda's [538 March Madness Piece](#)
- Zach Dean Mayer:
  - ◆ Check out Zach's [DataCamp Class](#)
- 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

A man with short, dark, curly hair is shown from the chest up. He is wearing a dark, possibly black, long-sleeved shirt. He is looking off-camera to his right with a serious, slightly intense expression. The background is a warm, yellowish-gold color, suggesting an indoor setting with soft lighting. There are some blurred shapes in the background, including what looks like a framed picture on the wall and some furniture. The overall mood is dramatic and focused.

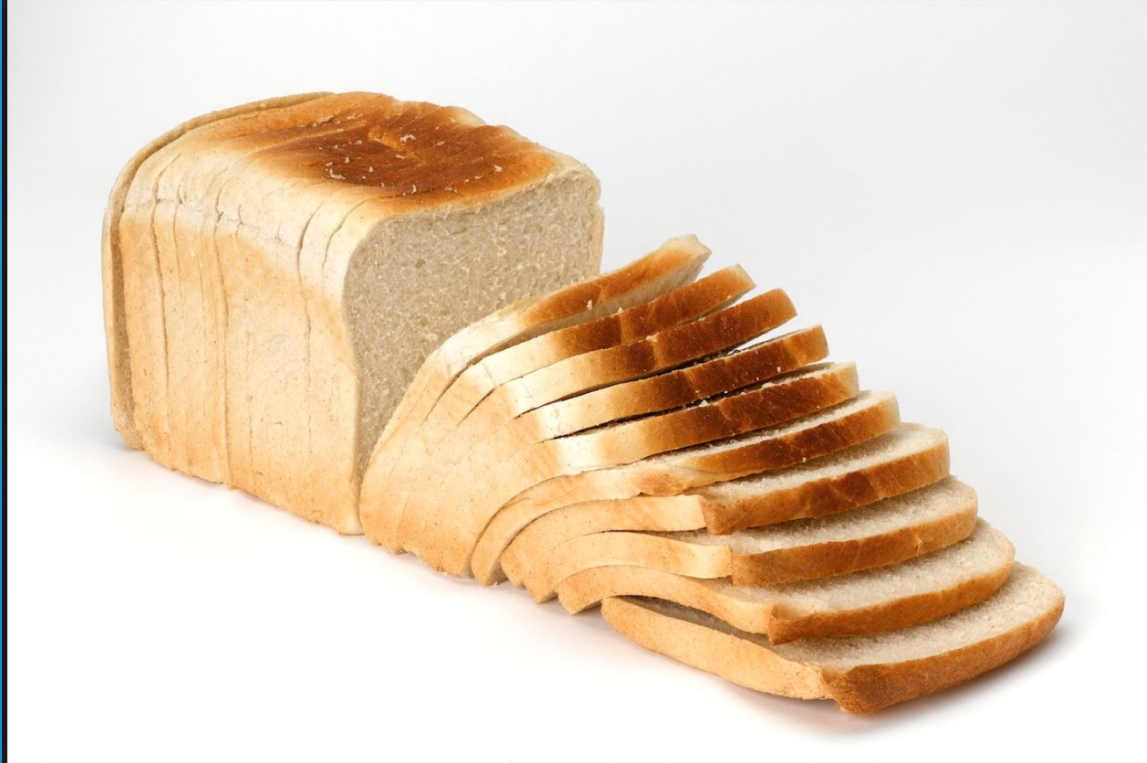
*A million dollars isn't cool.  
You know what's cool?*

# 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”.*

