

# Distance Learning: Advising at Scale

Harry Weaver



**Can we help students  
understand what they need to  
do to succeed?**





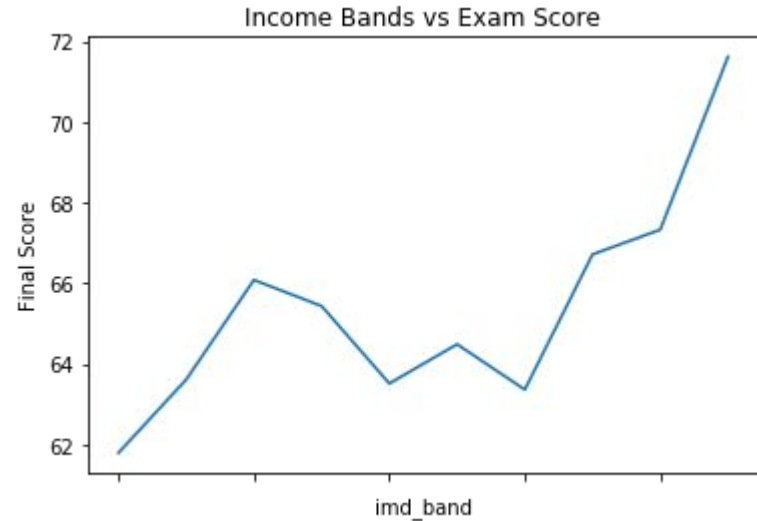
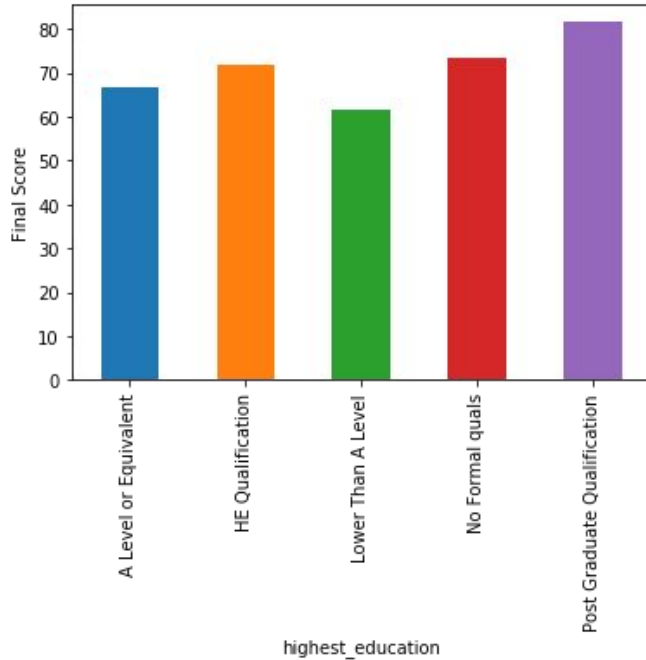
# What affects student performance on a final?

Personal  
Background and  
Experience

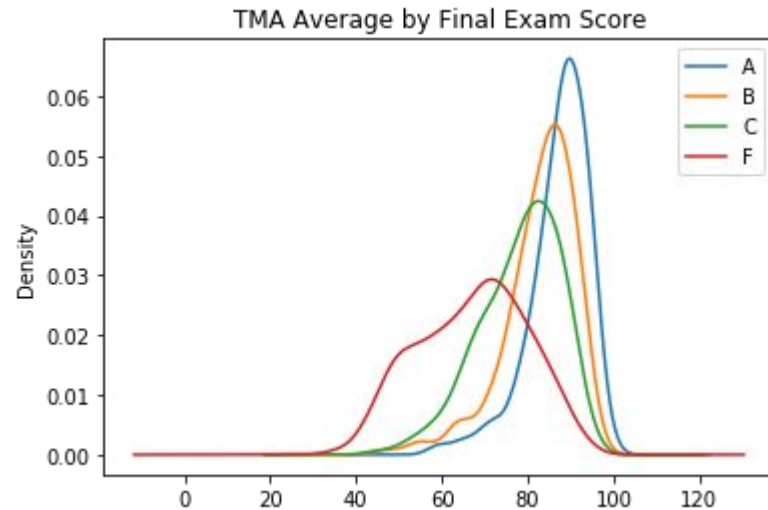
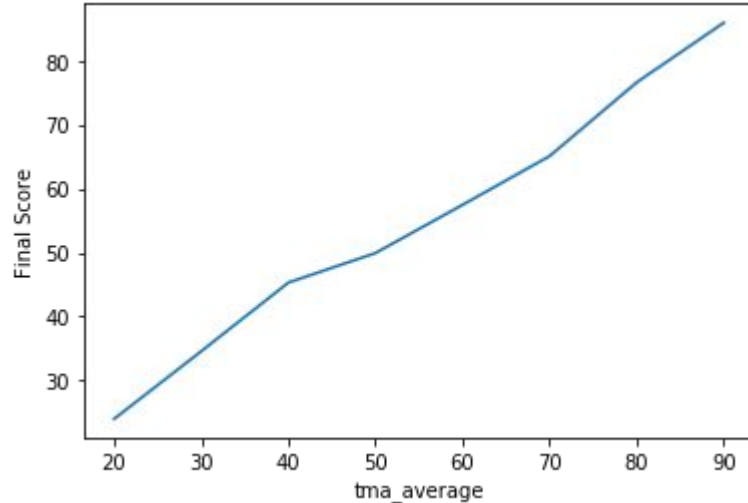
Class  
Performance

Studying

# Personal Background - Education and Income

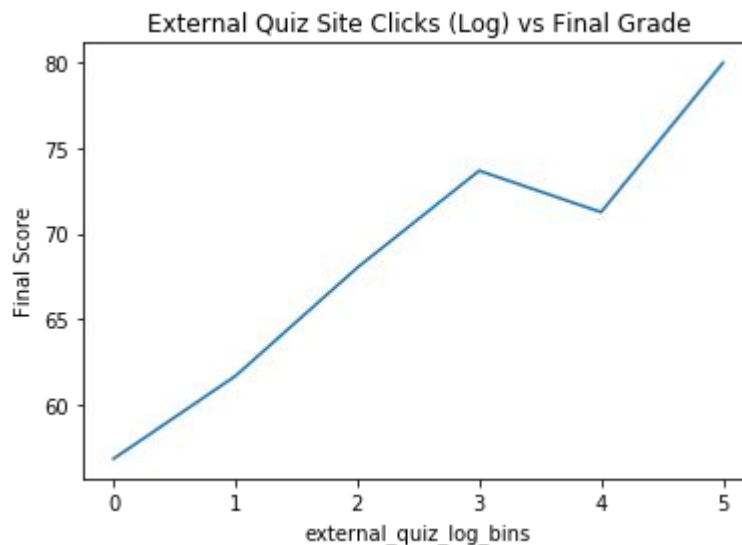
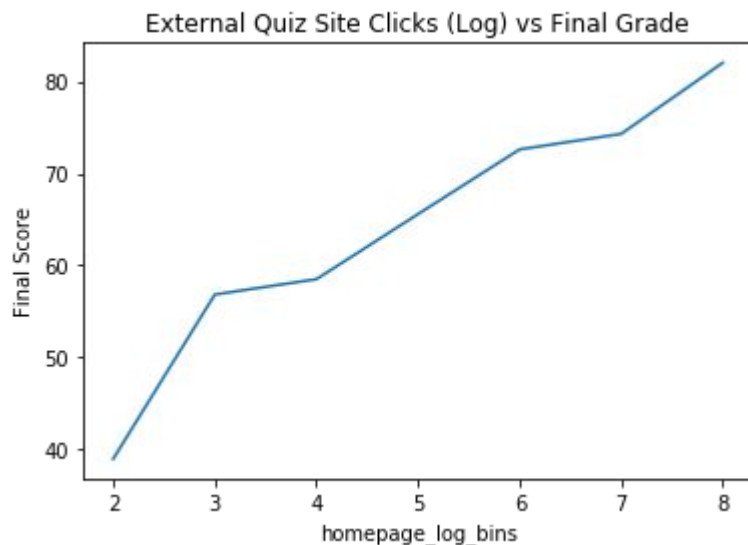


# Past Performance correlates strongly to final exam performance





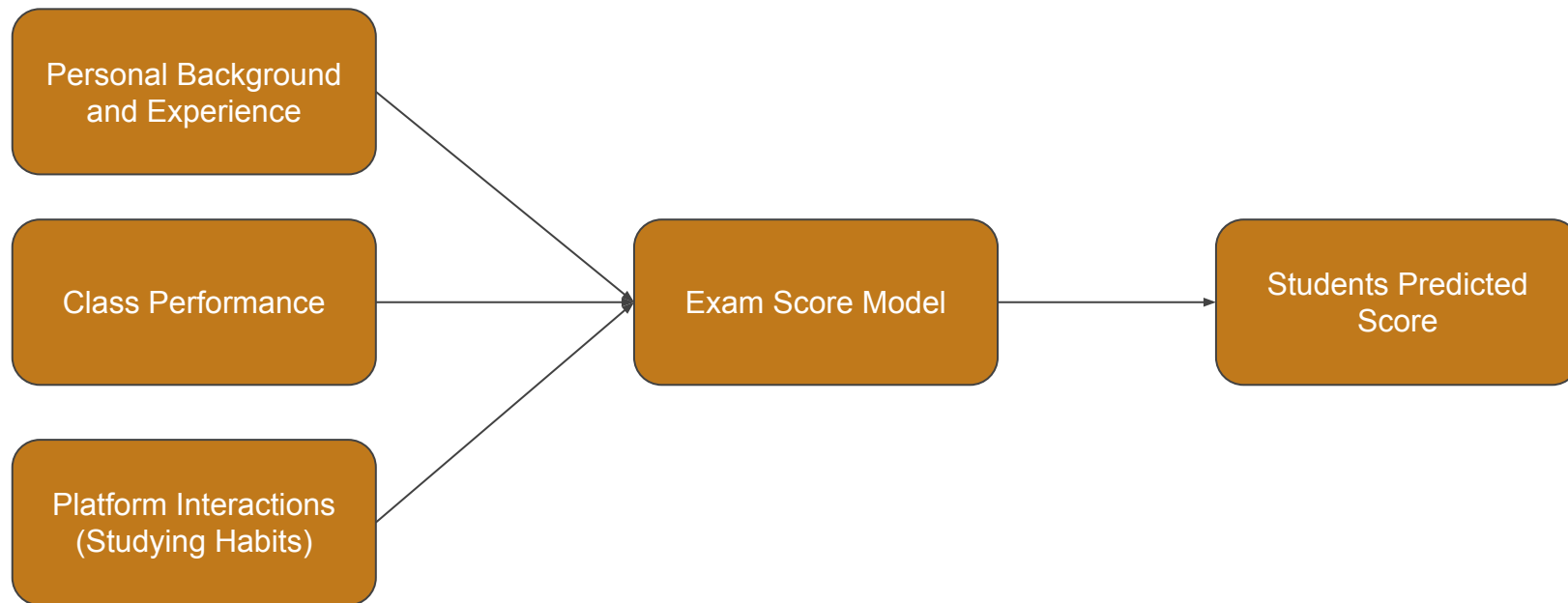
# How much you study matters on your final grade



**Can we utilize a model to predict  
how a student will do on the  
final?**



# Model Design

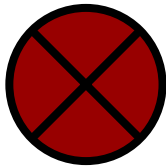




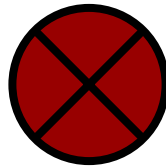


# What can we potentially influence after all quizzes have been taken

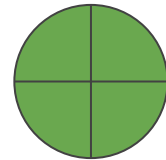
Personal  
Background and  
Experience



Class  
Performance

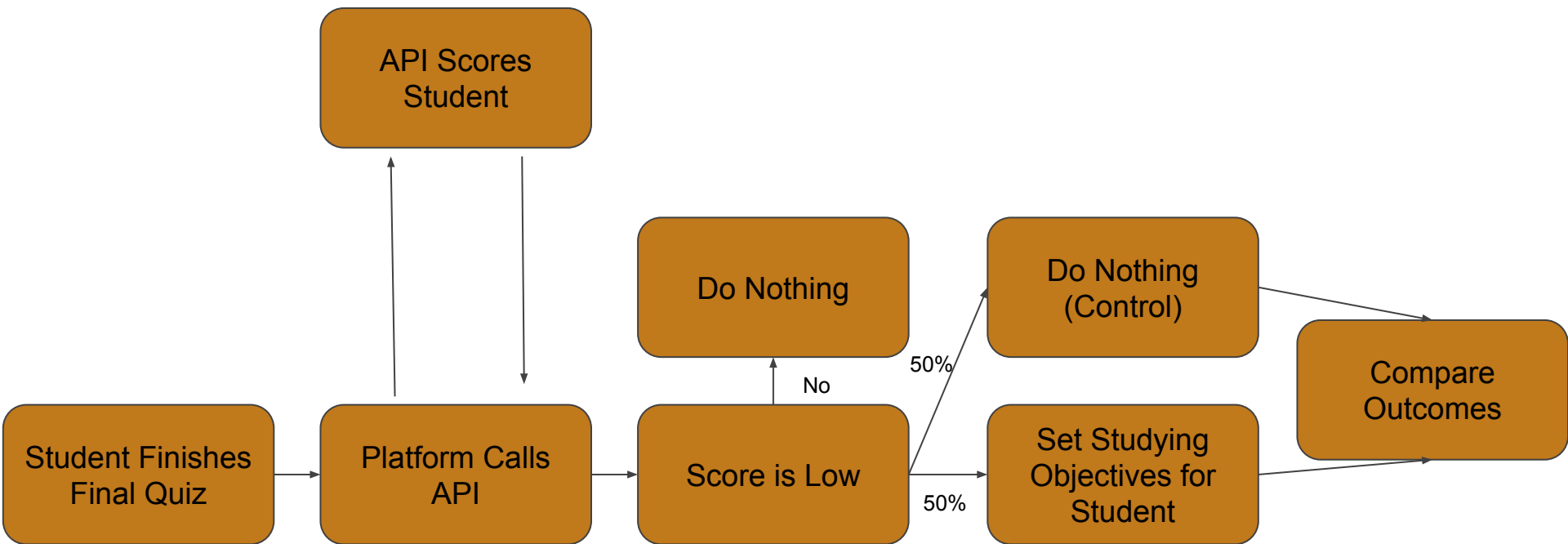


Studying

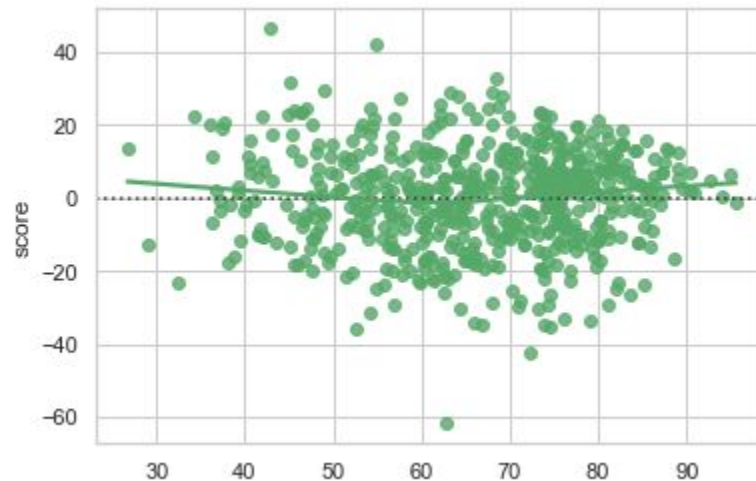
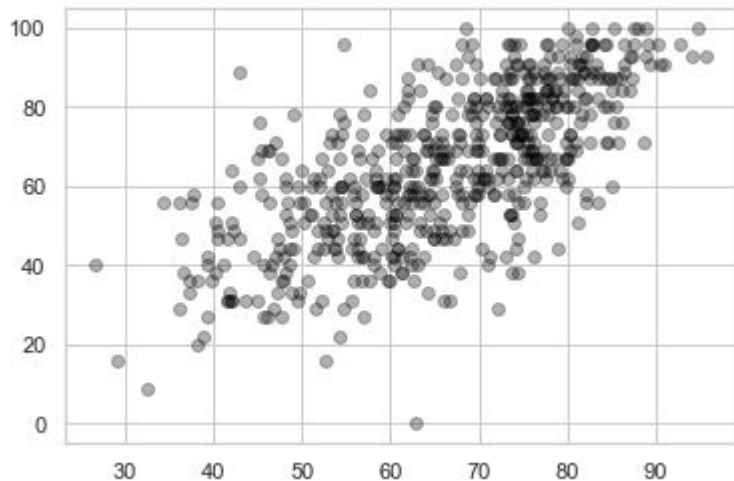




# Experiment Design



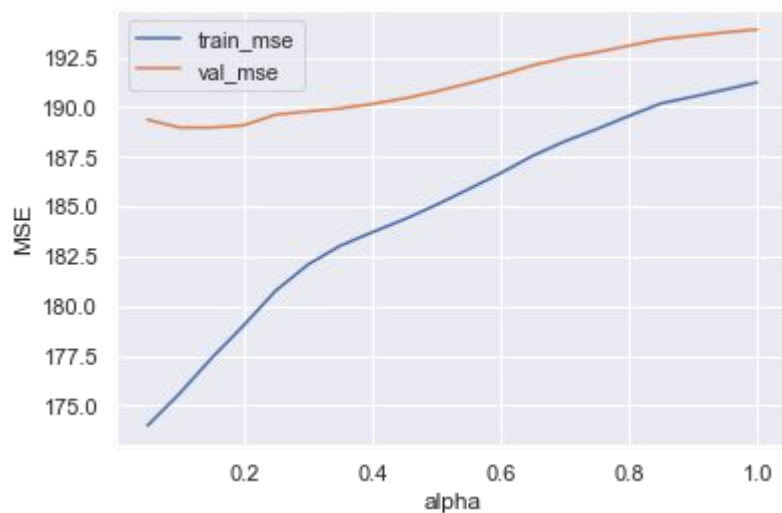
# Linear Regression - .48 R Squared



- .48 R Squared
- 189 MSE

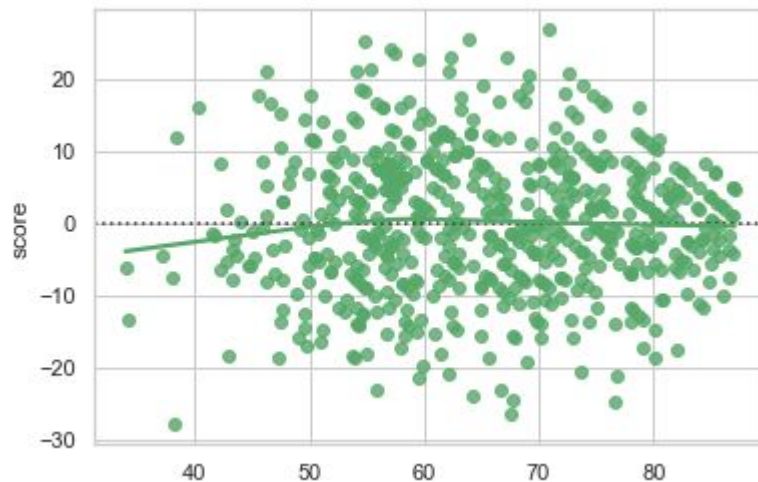
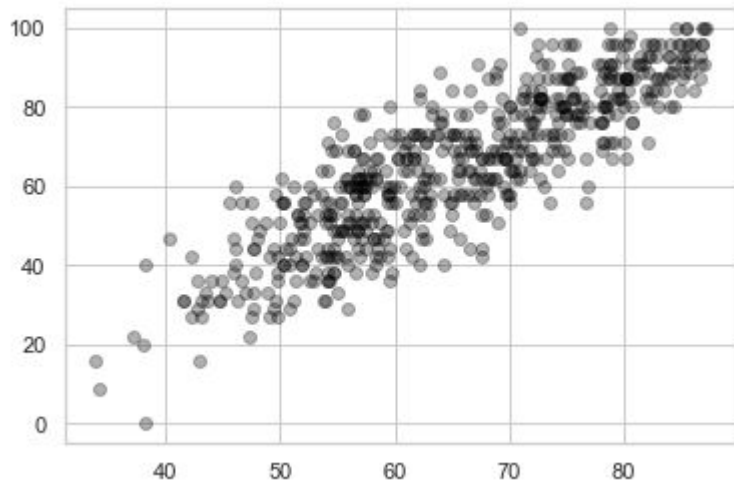


# Lasso Regression - .48 R Squared





# Gradient Boosting Regressor



- .68 R Squared
- 115 MSE