# Final Test

## Due Date

Tuesday March 8th 3PM

## Case Study

**Competitive Auctions on eBay.com.** The file *eBayAuctions.csv* contains information on

1972 auctions transacted on eBay.com during May–June 2004. The goal is to use these data to

build a model that will distinguish competitive auctions from noncompetitive ones. A

competitive auction is defined as an auction with at least two bids placed on the item being

auctioned. The data include variables that describe the item (auction category), the seller (his

or her eBay rating), and the auction terms that the seller selected (auction duration, opening

price, currency, day of week of auction close). In addition, we have the price at which the

auction closed. The goal is to predict whether or not an auction of interest will be competitive.

Note: If we want to predict at the start of an auction or whether it will be competitive, we cannotuse the information on the closing price. Therefore, avoid using ClosePrice in your models

Note: We are assuming all records are independent of one another. There is no need to account for correlation across records, since we did not cover that in this course.

**Data preprocessing.** Create dummy variables for the following categorical predictors. These include Category (18 categories), Currency (USD, GBP, Euro), EndDay (Monday–Sunday), and

Duration (1, 3, 5, 7, or 10 days).

## Details

All random\_states should be set to 1.

You will have 3 hours to complete the Jupyter notebook and copy your python code for each question from your notebook in to the answer textbox in the quiz questions.

Once complete please submit your python notebook that includes the exact same copy of your code entered in the quiz answer text box into the Final Test folder in the Assignments section of eCentennial. Failure in doing so will result in no grades for that response.

## Questions

***Refer to the quiz section***