JENNIFER

Welcome to Team Take Five’s final presentation. I am happy to introduce our team: Michael Bien, Debra Wu, Jinah Porter and myself Jennifer Darby. We came together to inspect multiple datasets in order to kickstart our project. We used binary classification models to work the datasets and determine the best fit. (change slide)

With the recent COVID-19’s impact on the world economy, we know many people are struggling financially. For some, losing their job or having reduced hours, means they are faced with trying to fill the gap in their income with credit. We were interested to analyze how credit card companies determine an applicant’s risk. For our project, we used machine learning models to better predict an applicant’s ability to pay based upon these metrics. Now, Debra will walk you through the workflow of our model…

(change slide)

DEBRA

With our workflow, first, we imported our data into Jupyter and cleaned our data to use for our models. We wanted to use a model with binary classification, a “yes” or “no” result, which gave us a choice between Random Forest and Logical Regression within SciLearn. Using the dataset, we were able to run both models. While Random Forest gave us a lower score of 71%, the Logical Regression model gave us a higher score of 96%, so we ultimately decided to go with the Logical Regression model. We then saved our model to a Pickle file, and connected the data to our HTML page. Now Michael will demonstrate what our model can do to determine your credit approval.

MICHAEL

Thank you Debra.  I'm now going to walk you through the credit application process.  
[CLICK APPLY TODAY] Start entering data in the form while reading each question]Each one of these questions refers to a feature that was used in our model.  Many of the initial questions on the application have little influence on the approval outcome (determine range).  However, the key driver of approval is the question: How many late payments have you made in the past 2 years? - X%.  We used a credit file to determine the number of late payments within our dataset.[For question How many late payments have you made in the past 2 years? enter 0 late payments.  Click Submit and show Approval page]Congratulations!  You've been approved.  You will be contacted by a financial advisor within 24 hours.If we go back to the form [click back button] and enter 5 late payments, we will see that the application was denied.  A link is provided so that the applicant can explore the ways that they can improve his/her score. Now I'm gong to hand it over to Jinah to review some additional aspects of out dataset.  Jinah...