Shiny Application Assignment

Buy better cars!

# Overview

Your Team will apply the skills discussed in the lecture on Shiny Applications to create a data mining tool for a fictional company. The rubric on which you will be assessed is given below. You should use this assignment as vehicle for creative discovery of what you can accomplish with data mining and how you can share those accomplishments with your audience in a meaningful way. The assignment is open-ended by design – Business Analytics is fundamentally a creative discipline.

## The Team

* You will be in a group of 5 or 6 people (17 total groups in the class)
* You should have been contacted by a TA before the lecture today
* You should get with your team ASAP to begin planning/working on the assignment

## The Deliverable

* All deliverables are due on October 10, 2016 (**given the presentation component, late submissions cannot be accepted for more than half credit**)
* Create a Shiny application which informs a fictional car bidder whether or not a given car is likely to be a lemon (bad buy)
  + Your code should be readable by other people – especially by yourself in 6 months
  + You should strive for a layout which enables clear understanding of the results and how to use it
* Provide data visualizations which support the recommendation of the algorithm
* Publish your application to <http://www.shinyapps.io> with the source code of your app enabled
* Your will have 3 minutes to present your application to the class and the representatives from Eastman Chemical Company (your graders) discussing the choices you made and demonstrating how the app works.
  + All team members will need to be standing in front of the class during the presentation and be available to answer questions
  + No slide decks, your application should be your only visual aid (the computer in the classroom will be sufficient for demonstrating your application – *do not* plan on using your laptop)
  + There will be one minute for questions.

## The Data

* Data comes from a [Kaggle competition](https://www.kaggle.com/c/DontGetKicked/) hosted by Carvana in 2012. The file ‘Full Data.csv’ has 36 variables (described in the ‘Data Dictionary.txt’ file) and 72,983 rows of car data.
* R code which generates a model has already been written and can be found in ‘modelwork.R’
* This is the model you should use to make predictions (we know it’s not very good – that’s not the point)

## Shiny App Resources

* Shiny Gallery (<http://shiny.rstudio.com/gallery/>)
* Shiny Dashboard (<https://rstudio.github.io/shinydashboard/>)
* GitHub Repository with data/model and this file (<https://github.com/emnBusinessAnalytics/UTShinyClass_2016>)

# Assessment

You will be assessed on several factors though primarily around the actual functionality of your application.

|  |  |
| --- | --- |
| Deliverable | Relative Importance |
| App and Source Code Published to shinyapps.io | 1 |
| User can change relevant inputs and clearly understand the model output | 4 |
| User has some meaningful data visualization to support the model conclusion | 3 |
| Presentation Quality (e.g. professionalism, language) | 2 |

There will be a peer review component. Your TA will provide you with details.