# PSTAT231 Final Project: Credit Card Fraud Detection with Machine Learning

Yuer Hao

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"Have you gone insane? How come to earth you were doing the a Casino?!" My sweet dream was interrupt by the call (in fact yelling) of my mother. Of course I did not spent 10,000 yuan in a casino—it was credit card fraud. Studies shows (data) have once or more expereinced credit card fraud. Especially in card use overseas, credit card information is easily attainable as time differentiates in the banking systems. Although most banks usually discharge the cardholder, the money are not refunded in many cases.

### Introduction

The purpose of this project

#### Some facts you need to know about Credit Card Fraud

Almost 40 percent of card holders do not have email or text alerts from their credit card company or bank enabled. Around 81 percent of victims without these notifications had to take additional action to reverse fraudulent charges, compared to just 19 percent of those with alerts enabled. ## Motivation Last month,

## summary(cars)

```
##
        speed
                        dist
##
    Min.
          : 4.0
                   Min.
                         : 2.00
   1st Qu.:12.0
                   1st Qu.: 26.00
   Median:15.0
                   Median : 36.00
##
           :15.4
                   Mean
                           : 42.98
    3rd Qu.:19.0
                   3rd Qu.: 56.00
   Max.
           :25.0
                           :120.00
```

# **Including Plots**

You can also embed plots, for example:



Note that the  $\mbox{echo}$  = FALSE parameter was added to the code chunk to prevent printing of the R code that generated the plot.