## Overview

The Jupyter notebook named **Practical_Application_1** can be used to gain insight about acceptance rate of a food coupon when it is offered to a driver of a vehicle in use.

## Data

This data is from the UCI Machine Learning Repository and was collected via a survey on Amazon Mechanical Turk.

## Findings Summary

Roughly 56.9% of coupon offerings were accepted, but depending on the type of coupon, the acceptance rates were widely different with Carry out & Take away being the most popular and Bar coupon being the least.

The granularity on temperate information in the dataset was inadequate but generally a colder temperature had a higher rate of acceptance.

Acceptance rate of bar coupons was over 70% if a driver went to a bar at least once a week. The acceptance rate was not a strong function of age, occupation or marital status. The data indicated that having a minor passenger could be a strong factor in accepting a bar coupon. Financial status of a driver (cost of going to restaurants and income) was another strong factor in determining the acceptance rate.

Acceptance rate for Carry Out and Take away ( CoTa) coupon was 73.8%, which was significantly higher than bar coupon acceptance rate. The history of using CoTa had a small influence on accepting a coupon of that type (less then 3% improvement). Similarly, factors such as age, marital status, age, passenger type and occupation had a weak impact on acceptance rate of Cota coupon acceptance. Interestingly, even financial status of a driver had a small impact on acceptance rate with people with income less than $50K only had 3% higher acceptance rate compared to all others.