in-vehicle coupon recommendation Data Set

Download: Data Folder, Data Set Description

Abstract: This data studies whether a person will accept the coupon recommended to him in different driving scenarios

Data Set Characteristics:	Multivariate	**Number of Instances:**	12684	**Area:**	Business
Attribute Characteristics:	N/A	**Number of Attributes:**	23	**Date Donated**	2020-09-15
Associated Tasks:	Classification	**Missing Values?**	Yes	**Number of Web Hits:**	49717

Source:

Tong Wang, tong-wang '@' uiowa.edu, University of Iowa
Cynthia Rudin, cynthia '@' cs.duke.edu, Duke University

Data Set Information:

This data was collected via a survey on Amazon Mechanical Turk. The survey describes different driving scenarios including the destination, current time, weather, passenger, etc., and then ask the person whether he will accept the coupon if he is the driver. For more information about the dataset, please refer to the paper:
Wang, Tong, Cynthia Rudin, Finale Doshi-Velez, Yimin Liu, Erica Klampfl, and Perry MacNeille. 'A bayesian framework for learning rule sets for interpretable classification.' The Journal of Machine Learning Research 18, no. 1 (2017): 2357-2393.

Attribute Information:

destination: No Urgent Place, Home, Work
passanger: Alone, Friend(s), Kid(s), Partner (who are the passengers in the car)
weather: Sunny, Rainy, Snowy
temperature:55, 80, 30
time: 2PM, 10AM, 6PM, 7AM, 10PM
coupon: Restaurant(<$20), Coffee House, Carry out & Take away, Bar, Restaurant($20-$50)
expiration: 1d, 2h (the coupon expires in 1 day or in 2 hours)
gender: Female, Male
age: 21, 46, 26, 31, 41, 50plus, 36, below21
maritalStatus: Unmarried partner, Single, Married partner, Divorced, Widowed

has_Children:1, 0
education: Some college - no degree, Bachelors degree, Associates degree, High School Graduate, Graduate degree (Masters or Doctorate), Some High School
occupation: Unemployed, Architecture & Engineering, Student,
Education&Training&Library, Healthcare Support,
Healthcare Practitioners & Technical, Sales & Related, Management,
Arts Design Entertainment Sports & Media, Computer & Mathematical,
Life Physical Social Science, Personal Care & Service,
Community & Social Services, Office & Administrative Support,
Construction & Extraction, Legal, Retired,
Installation Maintenance & Repair, Transportation & Material Moving,
Business & Financial, Protective Service,
Food Preparation & Serving Related, Production Occupations,
Building & Grounds Cleaning & Maintenance, Farming Fishing & Forestry
income: $37500 - $49999, $62500 - $74999, $12500 - $24999, $75000 - $87499,
$50000 - $62499, $25000 - $37499, $100000 or More, $87500 - $99999, Less than $12500
Bar: never, less1, 1~3, gt8, nan4~8 (feature meaning: how many times do you go to a bar every month?)
CoffeeHouse: never, less1, 4~8, 1~3, gt8, nan (feature meaning: how many times do you go to a coffeehouse every month?)
CarryAway:n4~8, 1~3, gt8, less1, never (feature meaning: how many times do you get take-away food every month?)
RestaurantLessThan20: 4~8, 1~3, less1, gt8, never (feature meaning: how many times do you go to a restaurant with an average expense per person of less than $20 every month?)
Restaurant20To50: 1~3, less1, never, gt8, 4~8, nan (feature meaning: how many times do you go to a restaurant with average expense per person of $20 - $50 every month?)
toCoupon_GEQ15min:0,1 (feature meaning: driving distance to the restaurant/bar for using the coupon is greater than 15 minutes)
toCoupon_GEQ25min:0, 1 (feature meaning: driving distance to the restaurant/bar for using the coupon is greater than 25 minutes)
direction_same:0, 1 (feature meaning: whether the restaurant/bar is in the same direction as your current destination)
direction_opp:1, 0 (feature meaning: whether the restaurant/bar is in the same direction as your current destination)
Y:1, 0 (whether the coupon is accepted)

Relevant Papers:

Wang, Tong, Cynthia Rudin, Finale Doshi-Velez, Yimin Liu, Erica Klampfl, and Perry MacNeille. 'A bayesian framework for learning rule sets for interpretable classification.' The Journal of Machine Learning Research 18, no. 1 (2017): 2357-2393.

Citation Request:

Please cite this paper if you use the dataset.
Wang, Tong, Cynthia Rudin, Finale Doshi-Velez, Yimin Liu, Erica Klampfl, and Perry MacNeille. 'A bayesian framework for learning rule sets for interpretable classification.' The Journal of Machine Learning Research 18, no. 1 (2017): 2357-2393.