

FUNSTATISTICSASDING

Pearson Correlation Assignment

Posted on February 28, 2016 by gracedinglin

This data set P1 is a store's customers' information .

There are 1966 customers' records .

variable " amount" is the money the customers spent in one month

variable "income" is consumers' yearly income

Applying pearson correlation on those two variables to see is there a correlation between consumers' income and monthly spending.

H0: there is no correlation between "consumers spending" and "consumers yearly income"

H1: there is correlation between "consumers spending" and "consumers yearly income"

SAS code

```
proc corr data=p1;
var amount income;
run;
```

Result :

P=0.7965 and r=0.00582

Based on the correlation result $r = 0.00582$ which is very close to 0 . It means there is very weak relationship . At the same time the P -value is 0.7965 which is way greater than 0.05. It means there is no significant . In this case H0 is accepted . The correlation result indicated that consumers' yearly income has not correlation with how much they spending in the store.

The SAS System

The CORR Procedure

2 Variables: AMOUNT INCOME

Simple Statistics

Variable	N	Mean	Std Dev	Sum	Minimum	Maximum	Label
AMOUNT	1966	474.47406	749.44485	932816	0	13285	Dollars Spent
INCOME	1966	30886	11667	60722391	0	108900	Yearly Income

Pearson Correlation Coefficients, N = 1966 Prob > r under H0: Rho=0		
	AMOUNT	INCOME
AMOUNT	1.00000	0.00582
Dollars Spent		0.7965
INCOME	0.00582	1.00000
Yearly Income	0.7965	

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