

18-Jan-2019

P > 0.05 accept , P < 0.05 reject

Median of total income for **new applicant** with **target 0** : **157500**

Median of total income for new applicant with **target 1** : **135000**

Credit amount for new applicant is high compared to old applicants:

Old applicants : with **Target 0 - 607500, Target 1 - 534672** (MEDIAN)

Documents [2 - 20] relation with target

OWN_CAR	TARGET	Values	Percentage
N	0	185675	91.49
	1	17249	8.50
Y	0	97011	92.75
	1	7576	7.24

There is some impact on the target

```
count = np.array([17249,7576])
nobs = np.array([17249+185675, 7576+97011])
stat, pval = proportions_ztest(count, nobs)
pval
#for Own_Car rejected null hypothesis:There is some impact on the target|
8.568910555407883e-34
```

OWN_REALTY	TARGET	Values	Percentage
N	0	86357	91.67
	1	7842	8.32
Y	0	196329	92.03
	1	16983	7.96

p-value=0.00065, There is some impact on the target

MOBIL	TARGET	Values	Percentage
0	0	1	100.0
1	0	282685	91.92
	1	24825	8.07

p-value=0.766, There is no impact on the target

EMP_PHONE	TARGET	Values	Percentage
0	0	52395	94.59
	1	2991	5.40
1	0	230291	91.34
	1	21834	8.65

p-value=2.03e-143, There is some impact on the target

WORK_PHONE	TARGET	Values	Percentage
0	0	227282	92.31
	1	18921	7.68
1	0	55404	90.36
	1	5904	9.63

p-value=2.34e-56, There is some impact on the target

CONT_MOBILE	TARGET	Values	Percentage
0	0	529	92.16
	1	45	7.83
1	0	282157	91.92
	1	24780	8.07

p-value=0.837, There is no impact on the target

PHONE	TARGET	Values	Percentage
0	0	202336	91.52
	1	18744	8.47
1	0	80350	92.96
	1	6081	7.03

p-value=8.60e-40, There is some impact on the target

EMAIL	TARGET	Values	Percentage
0	0	266618	91.91
	1	23451	8.08
1	0	16068	92.12
	1	1374	7.87

p-value=0.329, There is no impact on the target

DOC_2	TARGET	Values	Percentage
0	0	282677	91.92
	1	24821	8.07
1	0	9	69.23
	1	4	30.76

p-value=0.002, There is some impact on the target

DOC_3	TARGET	Values	Percentage
0	0	83658	93.81
	1	5513	6.18
1	0	199028	91.15
	1	19312	8.84

p-value=1.55e-133, There is some impact on the target

DOC_4	TARGET	Values	Percentage
0	0	282661	91.92
	1	24825	8.07
1	0	25	100.

p-value=0.138, There is no impact on the target

DOC_5	TARGET	Values	Percentage
0	0	278410	91.92
	1	24453	8.07
1	0	4276	91.99
	1	372	8.00

p-value=0.860, There is no impact on the target

DOC_6	TARGET	Values	Percentage
0	0	257115	91.68
	1	23318	8.31
1	0	25571	94.43
	1	1507	5.56

p-value=1.183e-56, There is some impact on the target

DOC_7	TARGET	Values	Percentage
0	0	282630	91.92
	1	24822	8.07
1	0	56	94.91
	1	3	5.08

p-value=0.399, There is no impact on the target

DOC_8	TARGET	Values	Percentage
0	0	259498	91.86
	1	22989	8.13
1	0	23188	92.66
	1	1836	7.33

P_value = 8.246 e-06, There is some impact on the target

DOC_9	TARGET	Values	Percentage
0	0	281562	91.91
	1	24751	8.08
1	0	1124	93.82
	1	74	6.17

P_value = 0.0157, There is some impact on the target

DOC_10	TARGET	Values	Percentage
0	0	282679	91.92
	1	24825	8.07
1	0	7	100.0

P_value = 0.433,There is no impact on the target

DOC_11	TARGET	Values	Percentage
0	0	281558	91.91
	1	24750	8.08
1	0	1128	93.76
	1	75	6.23

P_value = 0.0190,There is some impact on the target

DOC_12	TARGET	Values	Percentage
0	0	282684	91.92
	1	24825	8.07
1	0	2	100.00

P_value = 0.675,There is no impact on the target

DOC_13	TARGET	Values	Percentage
0	0	281632	91.9
	1	24795	8.09
1	0	1054	97.2
	1	30	2.76

P_value = 1.333 e-10,There is some impact on the target

DOC_14	TARGET	Values	Percentage
0	0	281813	91.91
	1	24795	8.08
1	0	873	96.67
	1	30	3.32

P_value = 1.537e-07,There is some impact on the target

DOC_15	TARGET	Values	Percentage
0	0	282325	91.92
	1	24814	8.079
1	0	361	97.04
	1	11	2.956

P_value = 0.0002,There is some impact on the target

DOC_16	TARGET	Values	Percentage
0	0	279783	91.89
	1	24675	8.10
1	0	2903	95.08
	1	150	4.91

P_value = 1.1887e-10, There is some impact on the target

DOC_17	TARGET	Values	Percentage
0	0	282606	91.92
	1	24823	8.074
1	0	80	97.56
	1	2	2.43

P_values = .0625, There is no impact on the target

DOC_18	TARGET	Values	Percentage
0	0	280328	91.90
	1	24683	8.092
1	0	2358	94.32
	1	142	5.68

P_value = 1.034 e-05, There is some impact on the target

DOC_19	TARGET	Values	Percentage
0	0	282515	91.92
	1	24813	8.07
1	0	171	93.44
	1	12	6.55

P_value = 0.451 , There is no impact on the target

DOC_20	TARGET	Values	Percentage
0	0	282543	91.92
	1	24812	8.07
1	0	143	91.66
	1	13	8.33

P_value = 0.904 , There is no impact on the target

DOC_21	TARGET	Values	Percentage
0	0	282597	91.92
	1	24811	8.07
1	0	89	86.40
	1	14	13.59

P_value = 0.039, There is some impact on the target

```
from statsmodels.stats.proportion import proportions_ztest
count = np.array([24821,4])
nobs = np.array([282677, 9])
stat, pval = proportions_ztest(count, nobs)
pval
#for doc2 rejected null hypothesis: There is some impact on the target
```