

Risk Analysis Report

Risk Analysis Report

Descriptive Statistics

Credit_score

index credit_score

count 7464.000000

mean 659.910906

std 132.352178

min 301.000000

25% 604.000000

50% 673.000000

75% 765.000000

max 850.000000

Area

area count

C 2304

A 1836

B 1433

D 849

E 636

F 406

Traffic_index

index traffic_index

count 7464.000000

mean 104.277947

std 33.797598

min 0.000000

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25% 80.700000

50% 109.800000

75% 132.800000

max 223.700000

Risk_group

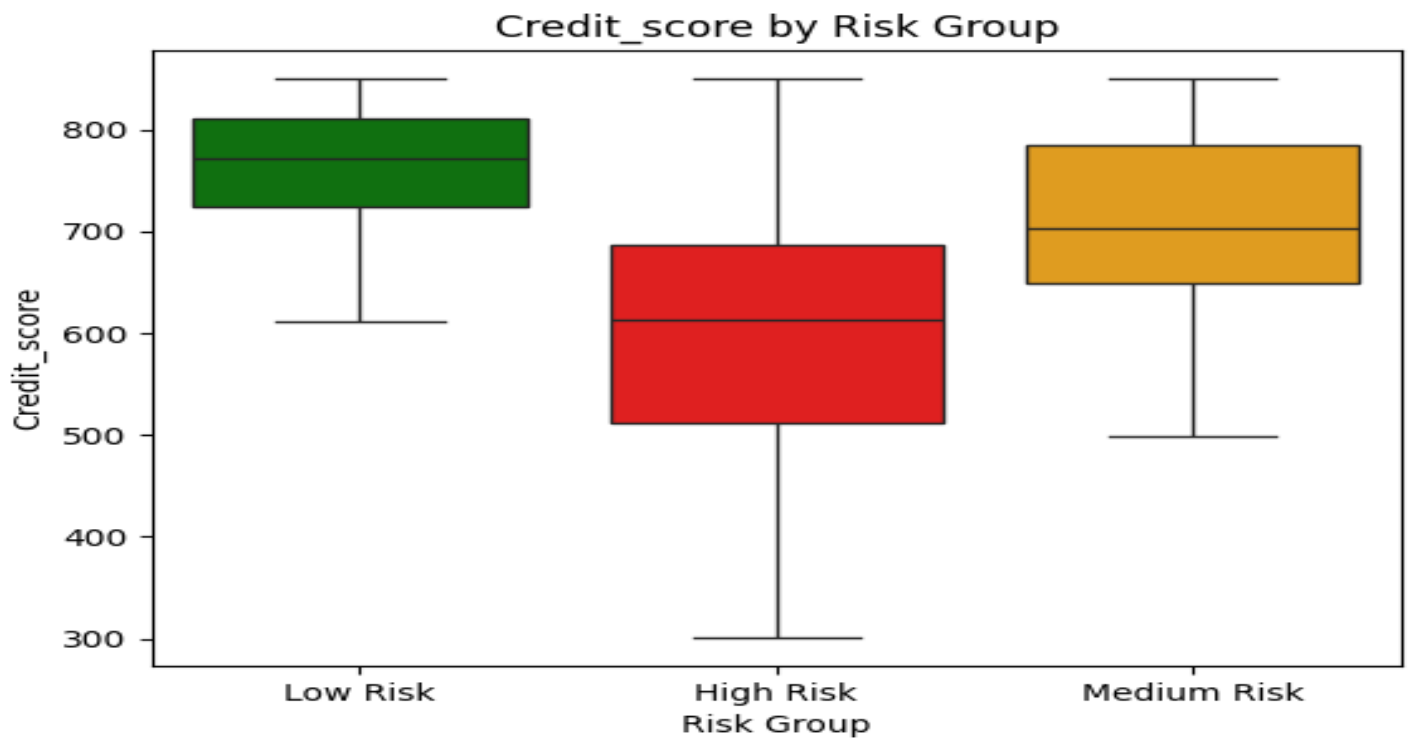
risk_group count

High Risk 4105

Medium Risk 1866

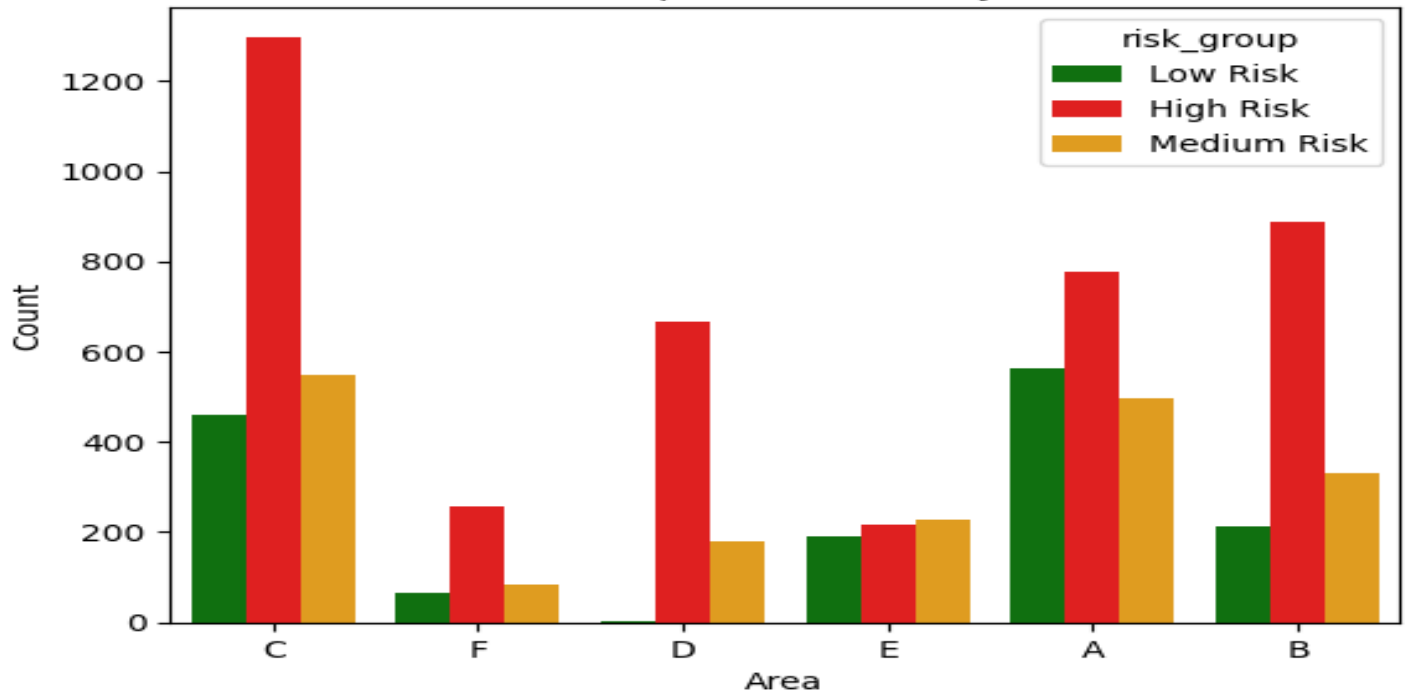
Low Risk 1493

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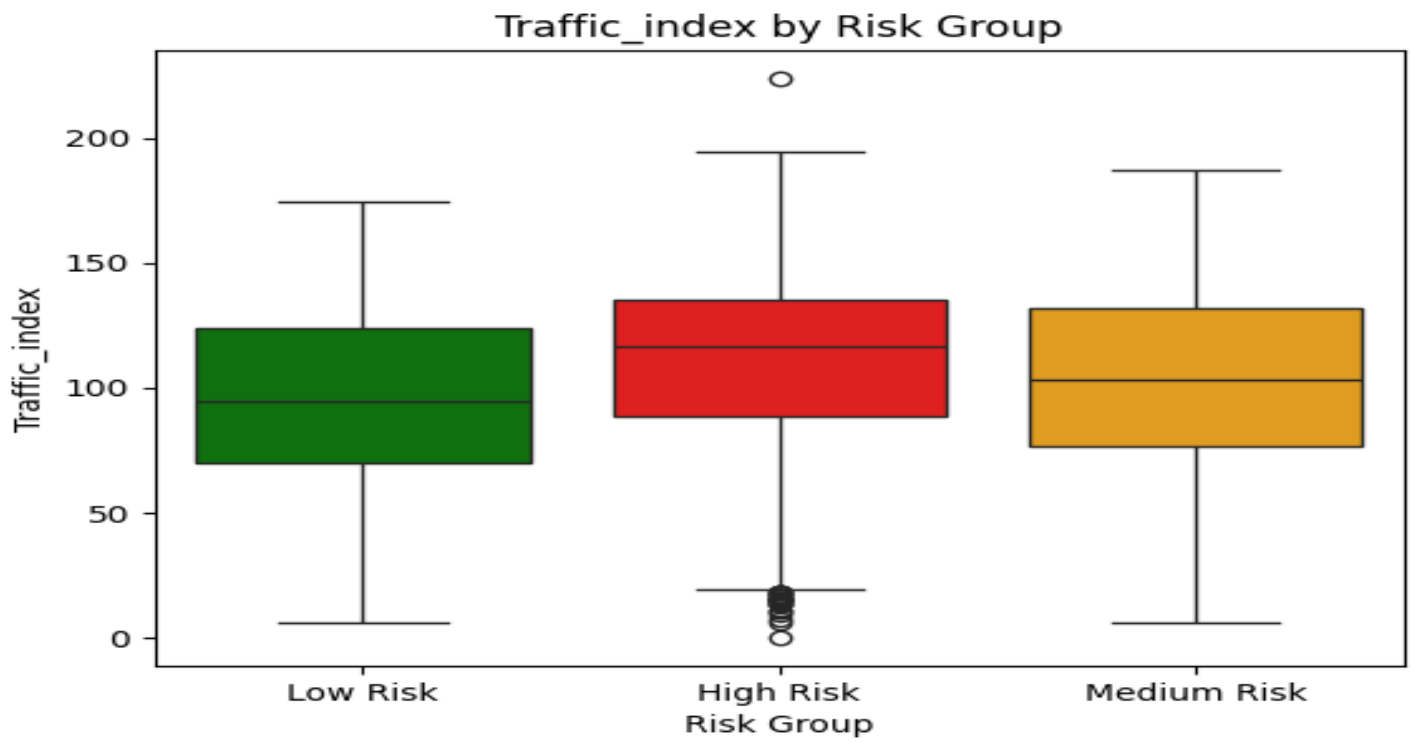


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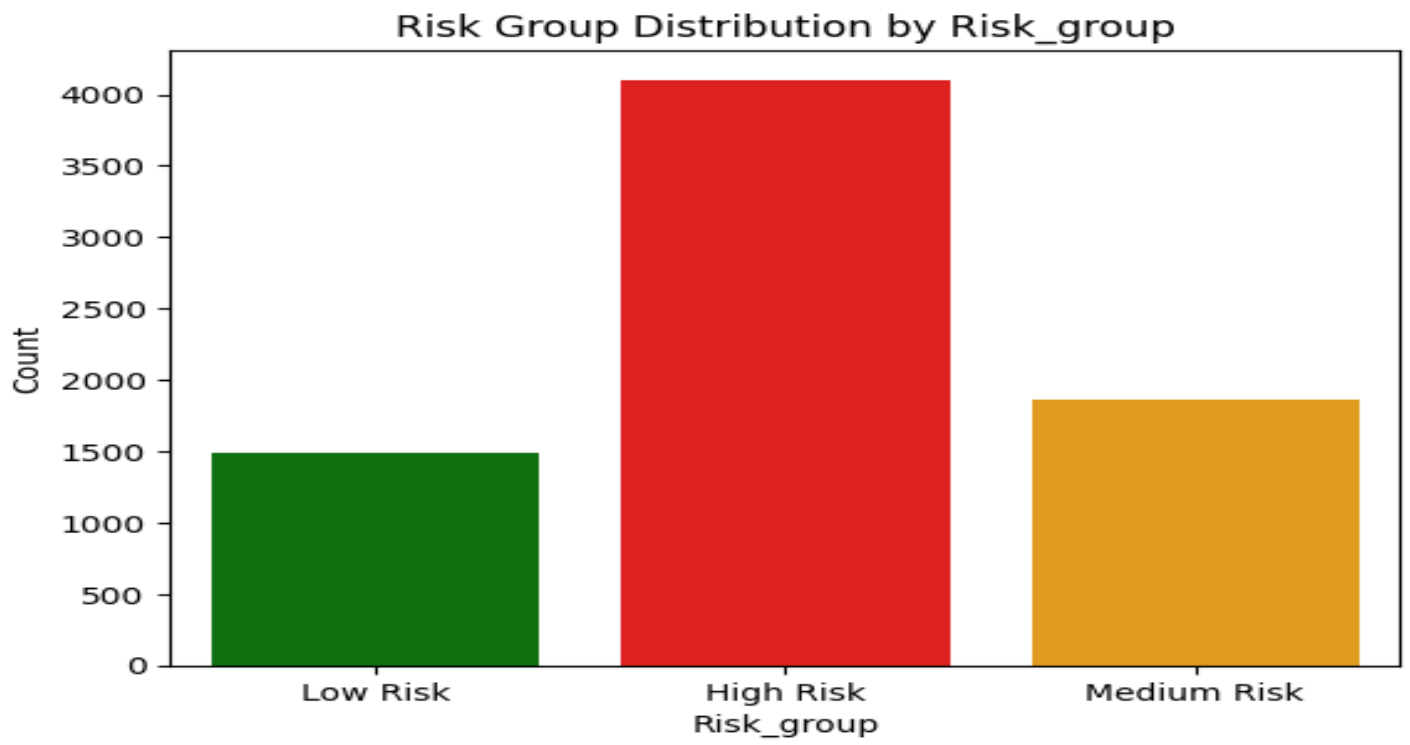
Risk Group Distribution by Area



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Hypothesis Testing Results

Credit_score

Normality high risk: 8.841800275705462e-28

Normality low risk: 2.3122713348141416e-20

Normality medium risk: 3.8446323705631933e-23

Levene p value: 8.144984227378393e-210

Kruskal wallis p value: 0.0

Dunn test: High Risk Low Risk Medium Risk

High Risk 1.000000e+00 0.000000e+00 1.132574e-202

Low Risk 0.000000e+00 1.000000e+00 9.846344e-47

Medium Risk 1.132574e-202 9.846344e-47 1.000000e+00

Area

Chi2 p value: 2.7889646460842896e-117

Standardized residuals: risk_group High Risk Low Risk Medium Risk

area

A -7.356073 10.319005 1.680336

B 3.593746 -4.349478 -1.439705

C 0.866979 -0.086723 -1.208333

D 9.212706 -12.801396 -2.213634

E -7.046281 5.477672 5.551361

F 2.322907 -1.909835 -1.737021

Traffic_index

Normality high risk: 1.663015153078965e-32

Normality low risk: 1.486148550685767e-16

Normality medium risk: 5.67233396306804e-21

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Levene p value: 5.986580272891553e-21

Kruskal wallis p value: 1.618805939826462e-55

Dunn test: High Risk Low Risk Medium Risk

High Risk 1.000000e+00 1.530015e-49 1.635854e-21

Low Risk 1.530015e-49 1.000000e+00 6.220733e-07

Medium Risk 1.635854e-21 6.220733e-07 1.000000e+00

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Analysis Log

Analyzing credit_score...

Normality test for High Risk - Statistics=0.972, p-value=0.000

Normality test for Low Risk - Statistics=0.958, p-value=0.000

Normality test for Medium Risk - Statistics=0.957, p-value=0.000

Levene's test for equal variances - Statistics=513.893, p-value=0.000

Assumptions for ANOVA not met, proceeding with Kruskal-Wallis test.

Kruskal-Wallis Test result: H-Statistic=2330.563, P-Value=0.000

Kruskal-Wallis significant, performing Dunn's test...

	High Risk	Low Risk	Medium Risk
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High Risk	1.000000e+00	0.000000e+00	1.132574e-202
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Low Risk	0.000000e+00	1.000000e+00	9.846344e-47
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Medium Risk	1.132574e-202	9.846344e-47	1.000000e+00
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Analyzing area...

Chi-Square Statistic: 575.73

Degrees of Freedom: 10

P-value: 0.000

Expected Frequencies:

risk_group	High Risk	Low Risk	Medium Risk
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area

A	1009.750804	367.249196	459.00
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B	788.111602	286.638398	358.25
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C	1267.138264	460.861736	576.00
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D	466.927251	169.822749	212.25
E	349.782958	127.217042	159.00
F	223.289121	81.210879	101.50

Chi-Square test significant, calculating standardized residuals...

Standardized Residuals:

risk_group	High Risk	Low Risk	Medium Risk
area			
A	-7.356073	10.319005	1.680336
B	3.593746	-4.349478	-1.439705
C	0.866979	-0.086723	-1.208333
D	9.212706	-12.801396	-2.213634
E	-7.046281	5.477672	5.551361
F	2.322907	-1.909835	-1.737021

Analyzing traffic_index...

Normality test for High Risk - Statistics=0.959, p-value=0.000

Normality test for Low Risk - Statistics=0.972, p-value=0.000

Normality test for Medium Risk - Statistics=0.965, p-value=0.000

Levene's test for equal variances - Statistics=46.857, p-value=0.000

Assumptions for ANOVA not met, proceeding with Kruskal-Wallis test.

Kruskal-Wallis Test result: H-Statistic=252.321, P-Value=0.000

Kruskal-Wallis significant, performing Dunn's test...

	High Risk	Low Risk	Medium Risk
High Risk	1.000000e+00	1.530015e-49	1.635854e-21

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Low Risk 1.530015e-49 1.000000e+00 6.220733e-07

Medium Risk 1.635854e-21 6.220733e-07 1.000000e+00