Credit Card Fraud Detection Using Enhanced NAIVE BAYES

Credit Card Fraud Detection !!

☑ Show what dataset looks like
☐ Show info of missing values
☐ Statistics of Valid and Fraud transactions

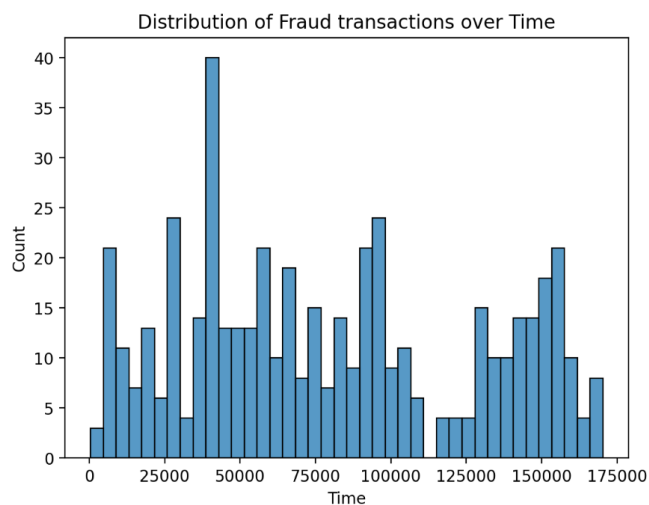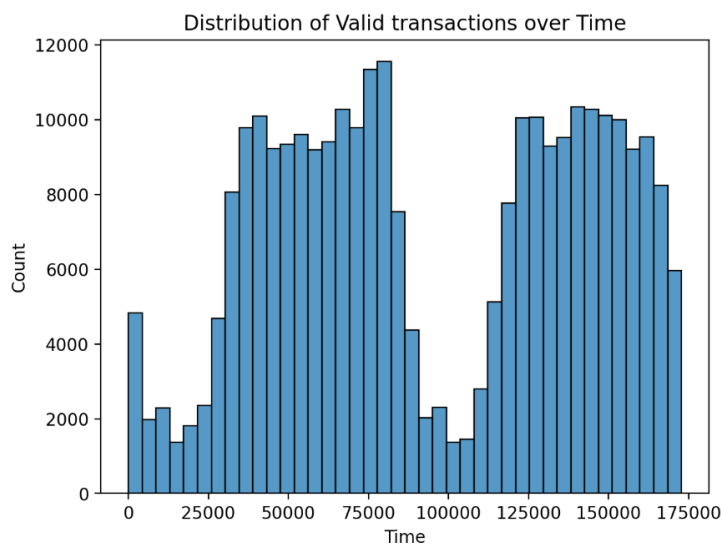|	Time	V1	V2	V3	V4	V5	V6	V7	V8	V9	V1
122954	76,755.0000	1.4369	-0.9178	0.0781	-1.3897	-1.2862	-1.1115	-0.5579	-0.2381	-2.4137	1
250554	154,967.0000	1.9303	-0.1524	-0.2731	1.5899	-0.4378	-0.2990	-0.2684	0.0047	1.2181	-0
35975	38,345.0000	-0.1871	0.6655	0.7251	1.3630	-0.2760	0.5842	-0.8107	-2.7427	-0.7670	-0
32141	36,657.0000	-1.4343	-0.3929	-1.0133	-3.5581	1.9614	2.6621	-0.6150	0.8614	-2.3565	1
49333	44,009.0000	-0.9563	-4.2551	0.2489	1.8960	-2.6190	0.7329	0.4618	-0.1556	0.1612	-0

Shape of the Dataset (28481, 31)

Description of the Dataset

	Time	V1	V2	V3	V4	V5	V6	V7
count	28,481.0000	28,481.0000	28,481.0000	28,481.0000	28,481.0000	28,481.0000	28,481.0000	28,48
mean	94,303.9781	0.0001	-0.0071	0.0140	-0.0099	0.0000	-0.0008	-0
std	47,450.5102	1.9390	1.6191	1.5201	1.4090	1.3526	1.3223	3
min	0.0000	-40.4701	-38.4308	-31.1037	-4.8973	-25.0258	-23.4967	-28
25%	53,923.0000	-0.9239	-0.6052	-0.8731	-0.8575	-0.6939	-0.7667	-4
50%	83,955.0000	0.0051	0.0561	0.1998	-0.0301	-0.0591	-0.2745	0

Distribution of Valid transactions over Time

Distribution of Fraud transactions over Time

There seems to be a decrease in number of transactions around 100000 Time mark. This might be during night. This could be the time that favours the fraudsters when valid transactions are very low.

Feature Importance
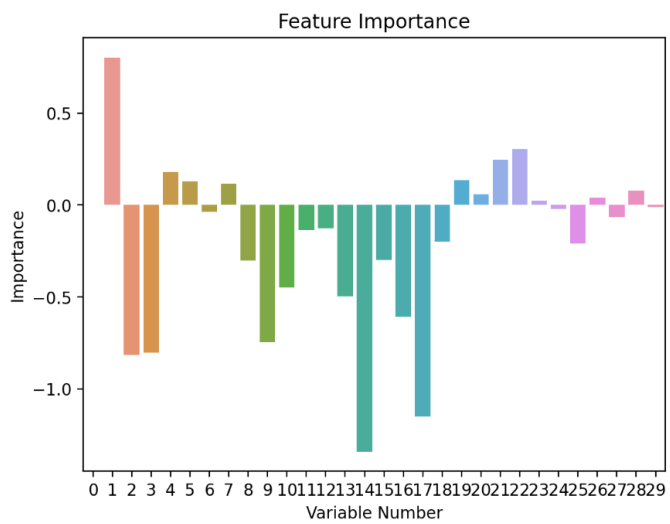
Accuracy: 0.9930128857835048

Confusion Matrix: