

```
1 C:\Users\kavan\PyCharmMiscProject\venv\Scripts\python.exe "C:\Users\kavan\PyCharmMiscProject\AIML INTERNSHIP\task9.py"
2 Dataset loaded successfully!
```

```
3
4     rownames card    reports      age   ... dependents  months  majorcards active
5     0       1      yes        0  37.66667   ...
6     1       2      yes        0  33.25000   ...
7     2       3      yes        0  33.66667   ...
8     3       4      yes        0  30.50000   ...
9     4       5      yes        0  32.16667   ...
10
11 [5 rows x 13 columns]
12
13 Card Distribution:
14 card
15 yes    1023
16 no     296
17 Name: count, dtype: int64
18
19 Dataset after encoding:
20   card    reports      age   income   ... majorcards active owner_yes selfemp_yes
21   0       1      0  37.66667  4.5200   ...
22   1       1      0  33.25000  2.4200   ...
23   2       1      0  33.66667  4.5000   ...
24   3       1      0  30.50000  2.5400   ...
25   4       1      0  32.16667  9.7867   ...
26
```

```
27 [5 rows x 12 columns]
```

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28 Feature matrix shape: (1319, 11)
29 Target shape: (1319, )
```

```
30
31 Baseline Model (Logistic Regression) Report:
32 precision recall f1-score support
33
34          0   0.88   0.98   0.93   59
35          1   0.99   0.96   0.98  205
36
37 accuracy      0.97   0.97   0.97   264
38 macro avg     0.94   0.97   0.95   264
39 weighted avg  0.97   0.97   0.97   264
40
41
42
43 Random Forest model trained successfully!
```

```
44
45 Random Forest Classification Report:
46 precision recall f1-score support
47
48          0   0.88   1.00   0.94   59
49          1   1.00   0.96   0.98  205
50
51 accuracy      0.97   0.98   0.96   264
52 macro avg     0.94   0.97   0.97   264
53 weighted avg  0.97   0.97   0.97   264
```

```
54
55 Model saved as 'random_forest_credit_model.pkl'
56
57 Task 9 Completed Successfully!
58
59
60 Process finished with exit code 0
61
```