

LOAN PREDICTION BASED ON CUSTOMER BEHAVIOR

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INTRODUCTION

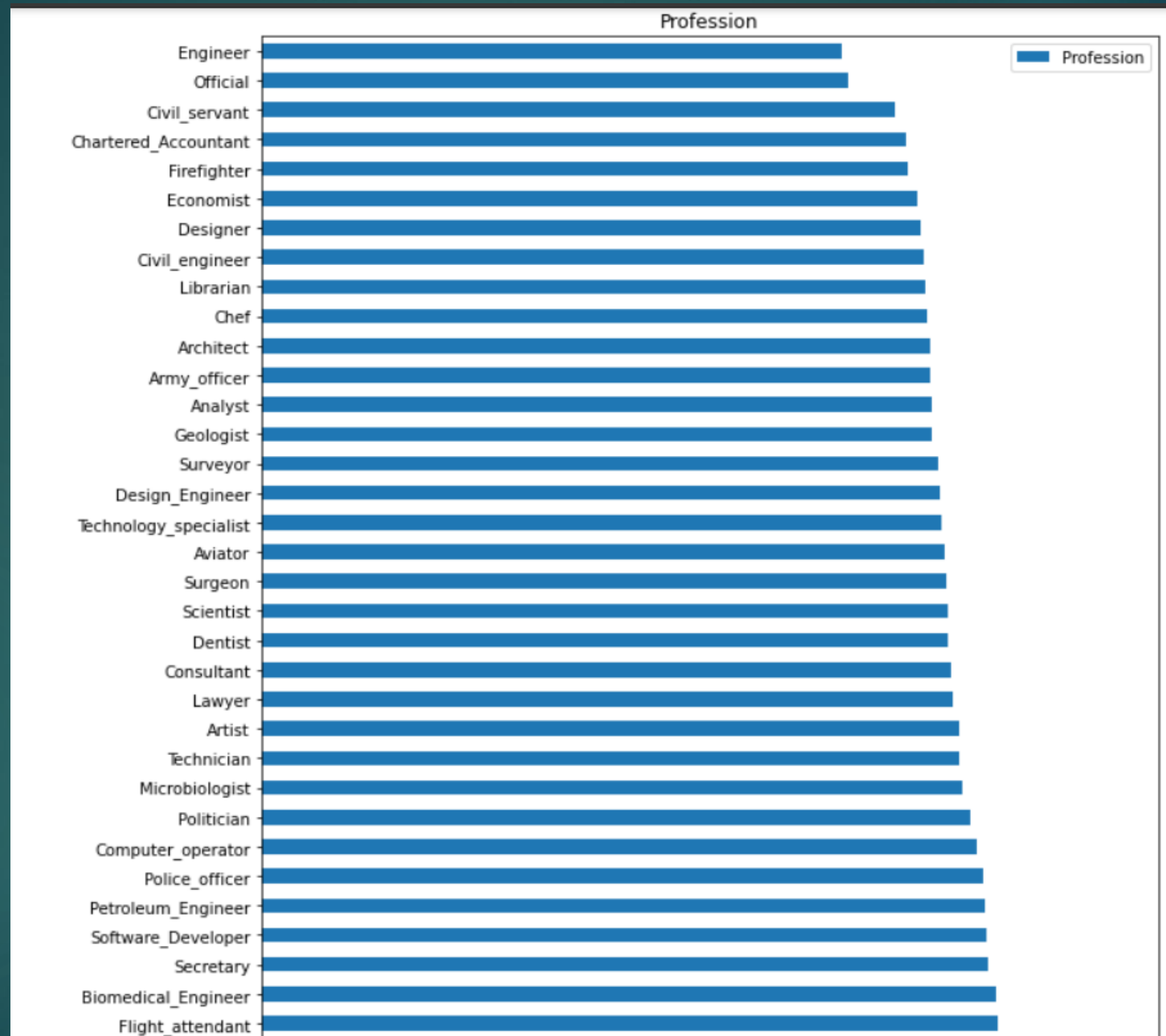
- ▶ The two most pressing issues in the banking sector are:
- ▶ How risky is the borrower?
- ▶ Should we lend to the borrower given the risk?
- ▶ The response to the first question dictates the borrower's interest rate. Interest rate, among other things (such as time value of money), tests the riskiness of the borrower, i.e. the higher the interest rate, the riskier the borrower.

Dataset

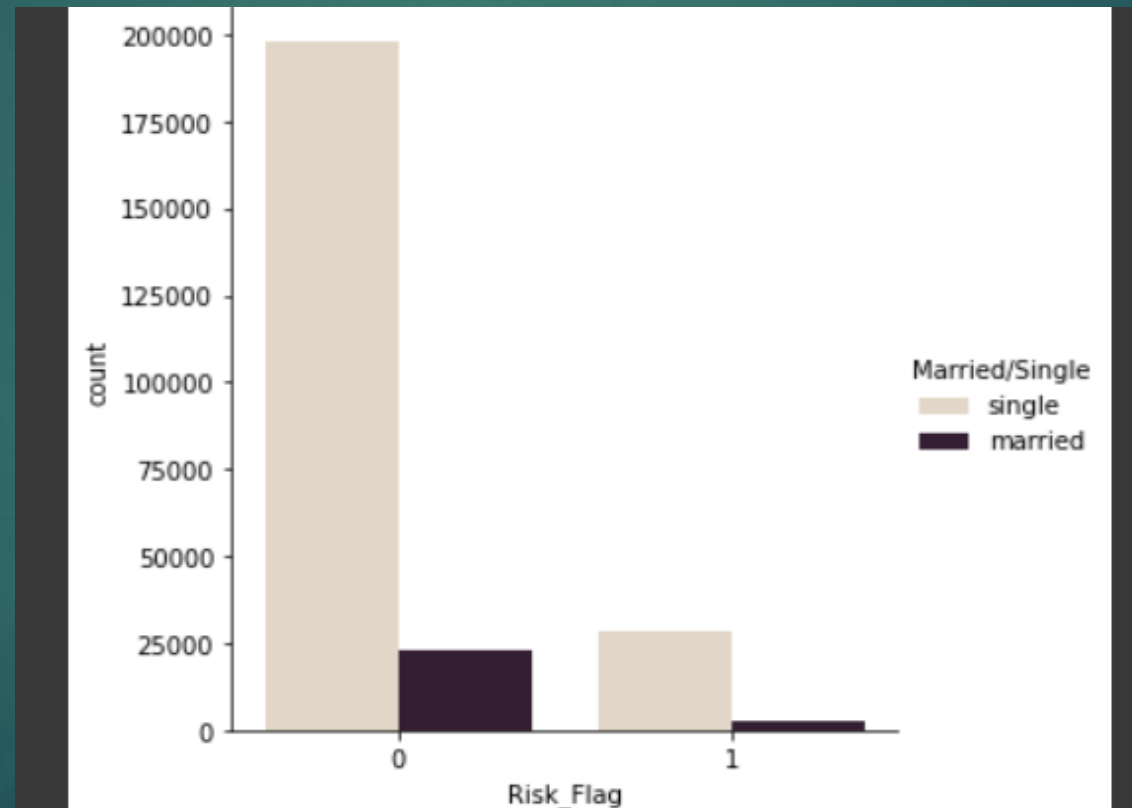
- The dataset was collected from Kaggle.
- The Dataset contains 250,000 individuals' data who either paid their loan on time or not indicated by the Risk Flag.
- Rows – 252,000 Columns - 12
- Software used Google collab.

Understanding Dataset

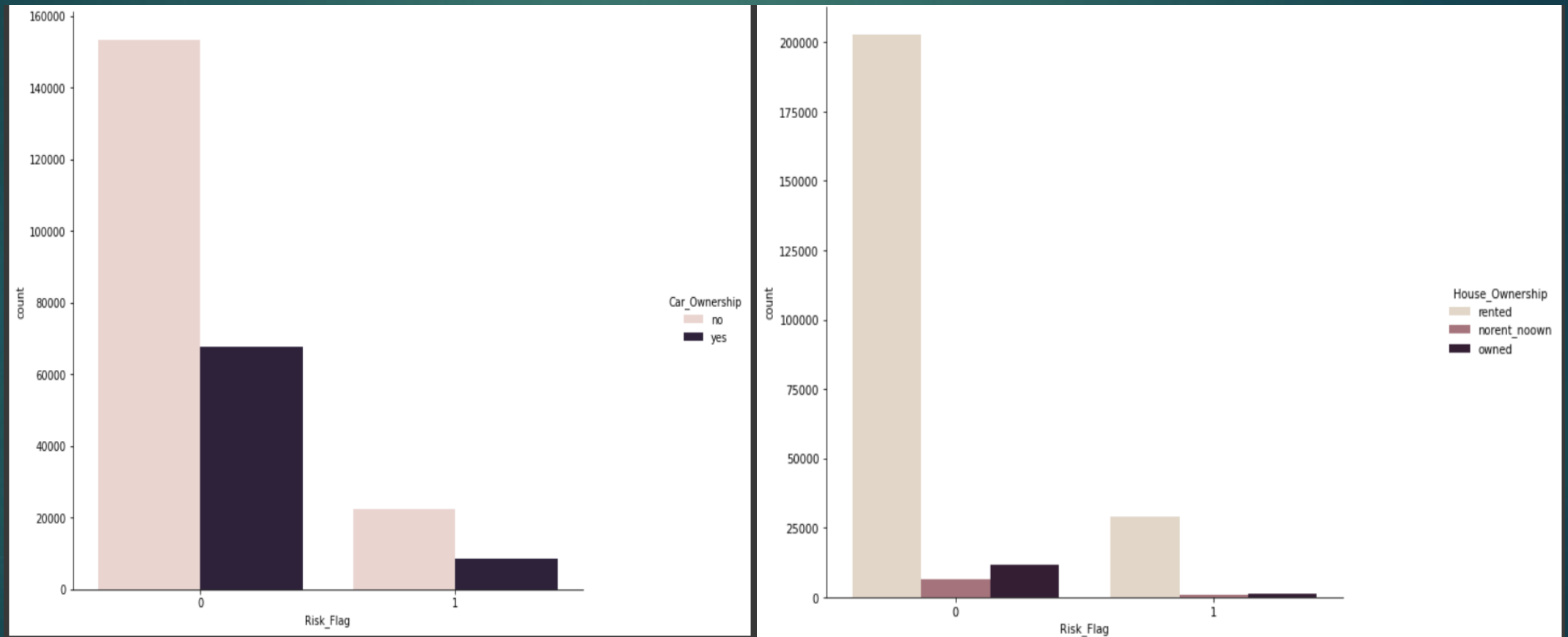
```
root
|-- Id: string (nullable = true)
|-- Income: string (nullable = true)
|-- Age: string (nullable = true)
|-- Experience: string (nullable = true)
|-- Married/Single: string (nullable = true)
|-- House_Ownership: string (nullable = true)
|-- Car_Ownership: string (nullable = true)
|-- Profession: string (nullable = true)
|-- CITY: string (nullable = true)
|-- STATE: string (nullable = true)
|-- CURRENT_JOB_YRS: string (nullable = true)
|-- CURRENT_HOUSE_YRS: string (nullable = true)
|-- Risk_Flag: string (nullable = true)
```



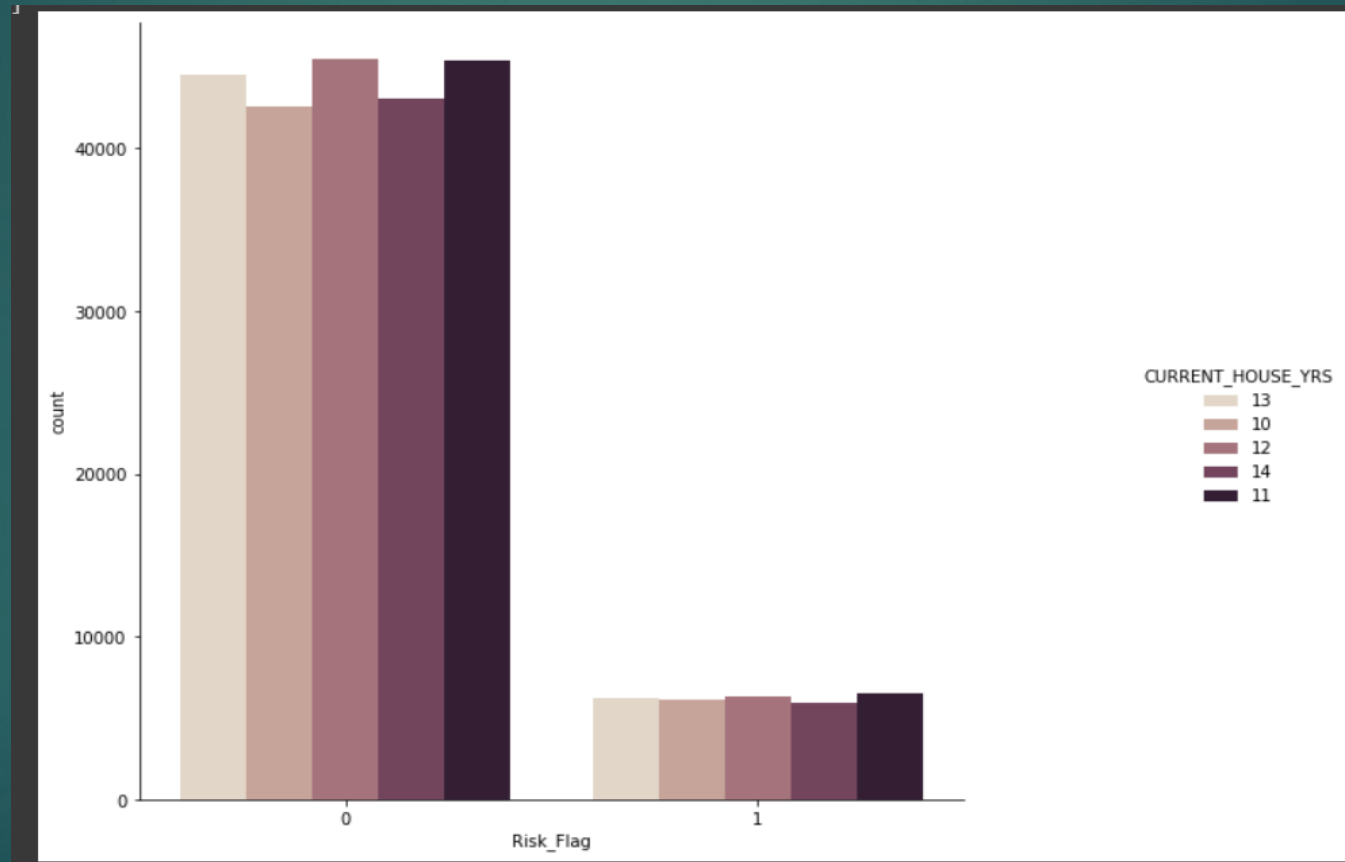
Marital Status WRT Risk Flag



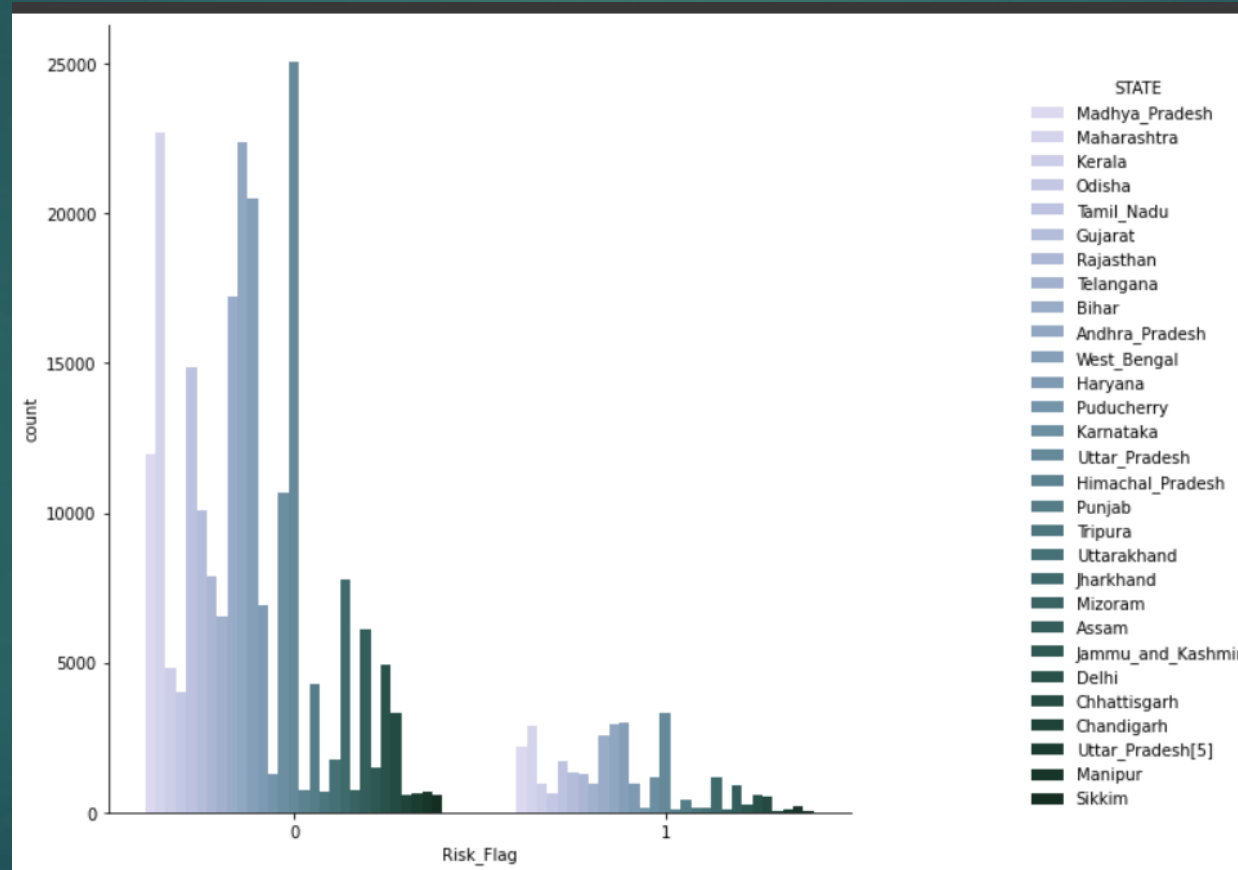
Car and House Ownership wrt Risk Flag



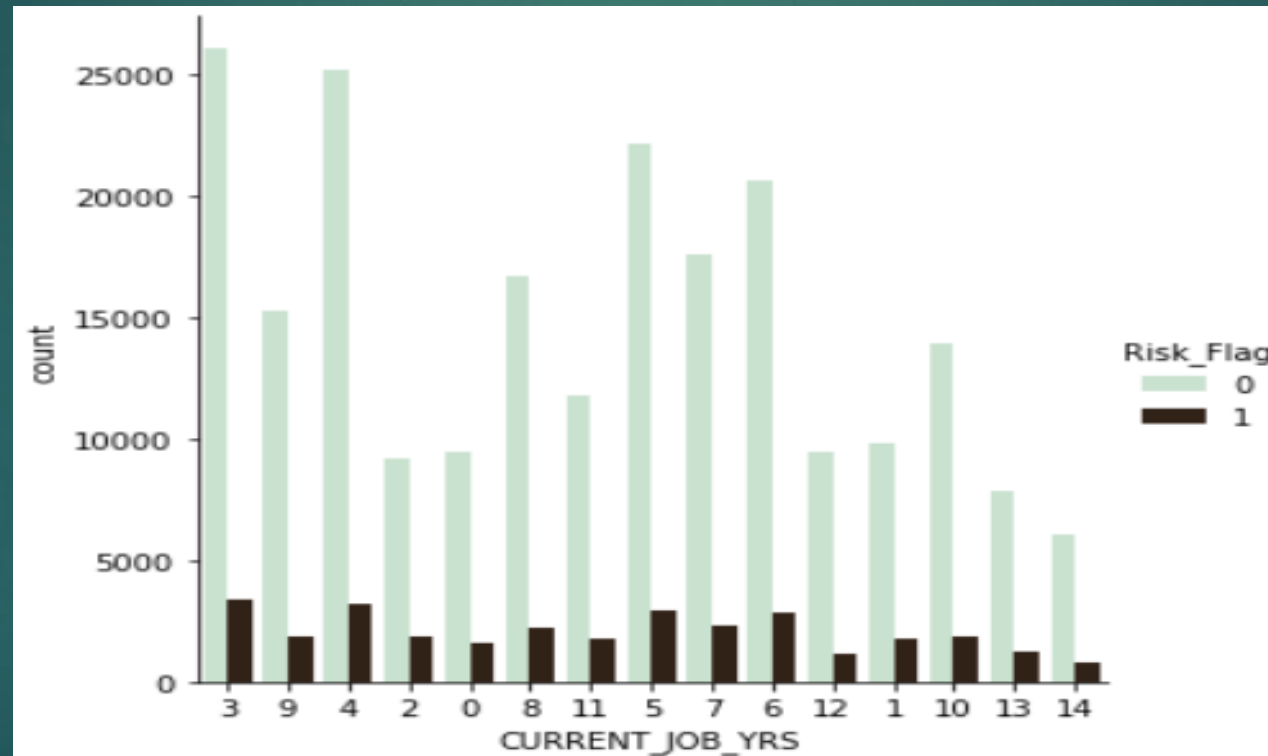
House Years



No of defaulters in each state



Job Years



Decision Tree Classifier

	features	rawPrediction	probability	prediction
0	(1303834.0, 23.0, 3.0, 3.0, 13.0, 0.0, 0.0, 0....	[134544.0, 17912.0]	[0.8825103636459044, 0.11748963635409561]	0.0
1	(7574516.0, 40.0, 10.0, 9.0, 13.0, 0.0, 0.0, 0...	[134544.0, 17912.0]	[0.8825103636459044, 0.11748963635409561]	0.0
2	(3991815.0, 66.0, 4.0, 4.0, 10.0, 1.0, 0.0, 0....	[134544.0, 17912.0]	[0.8825103636459044, 0.11748963635409561]	0.0
3	(6256451.0, 41.0, 2.0, 2.0, 12.0, 0.0, 0.0, 1....	[5032.0, 934.0]	[0.8434461951055984, 0.1565538048944016]	0.0
4	(5768871.0, 47.0, 11.0, 3.0, 14.0, 0.0, 0.0, 0...	[134544.0, 17912.0]	[0.8825103636459044, 0.11748963635409561]	0.0

Thank You!