



# Bank Loan

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MACHINE LEARNING CLASSIFICATION

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# Introduction

- loan is one of the most important schemes of banks..



- We mean by Bank Loan is when a bank offers to lend money to consumers for a certain time period. As a condition of the bank loan, the borrower will need to pay a certain amount of interest..



- Bank loans can be short term or long term, depending on the purpose of the loan.



# Bank Loan Status Dataset

Kaggle

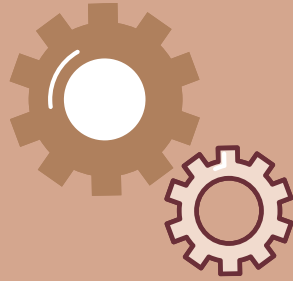
Target Columns:

- Short Term
- Long Term

110,000 loan records  
18 features



# Tools:



- Python
- Numpy
- Pandas
- Sklearn
- Seaborn
- Matplotlib





# EDA

Exploratory data analysis

# Data Cleaning



**Check for NaN and deal with them**



**Drop Duplicate**



**Drop unwanted columns**



**Dropping outliers**

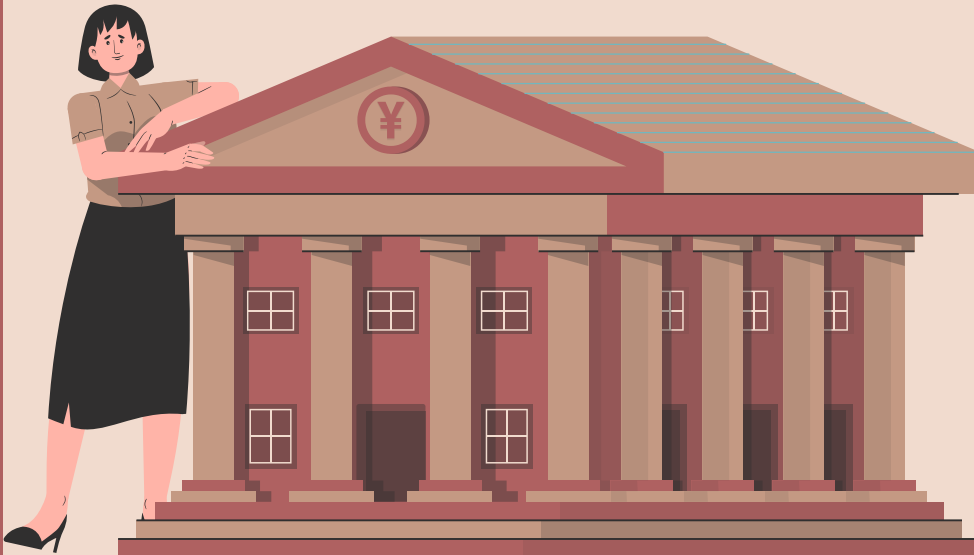


# Feature Engineering

**One hot Encoding**



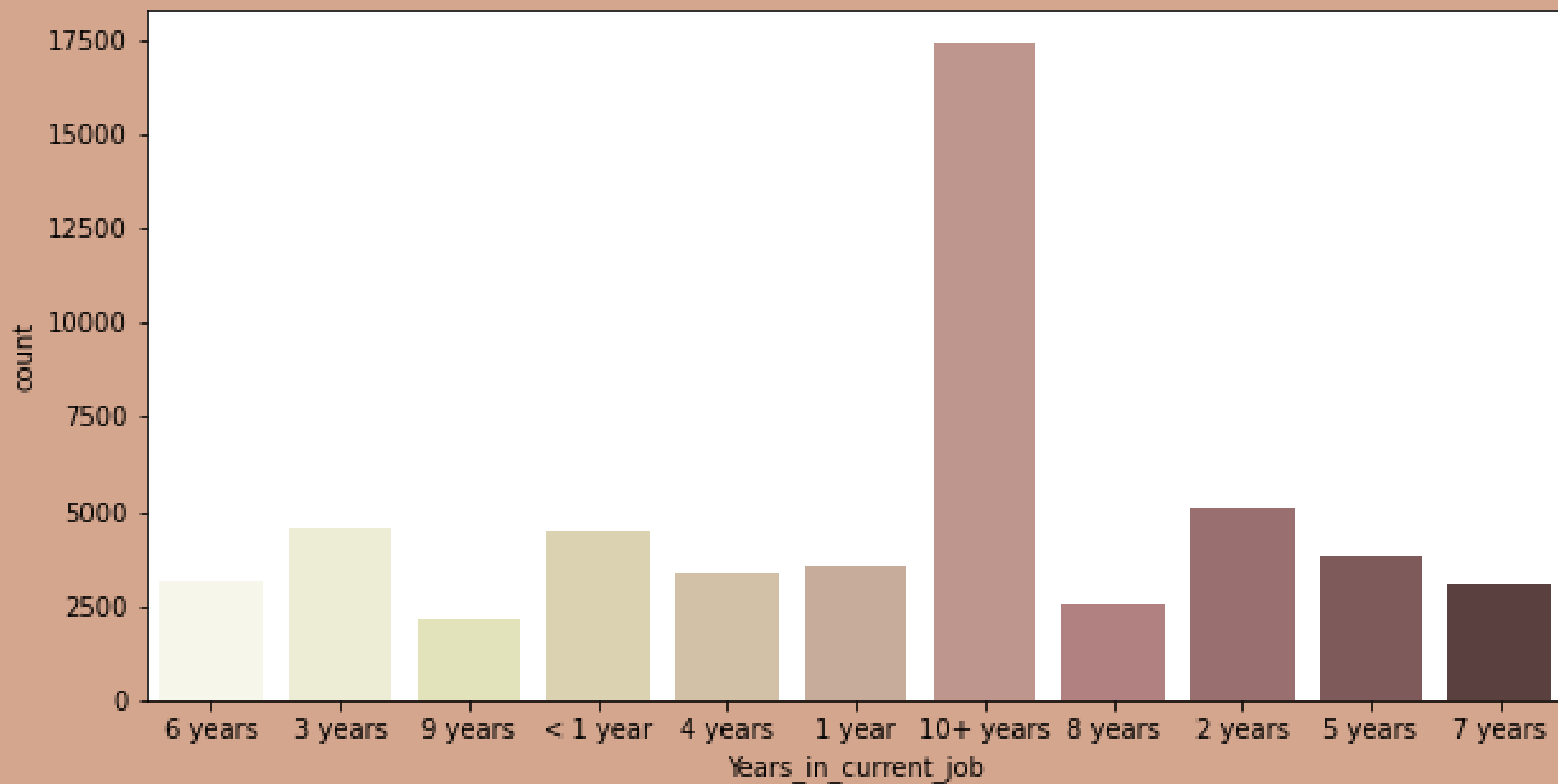
**Correlation**



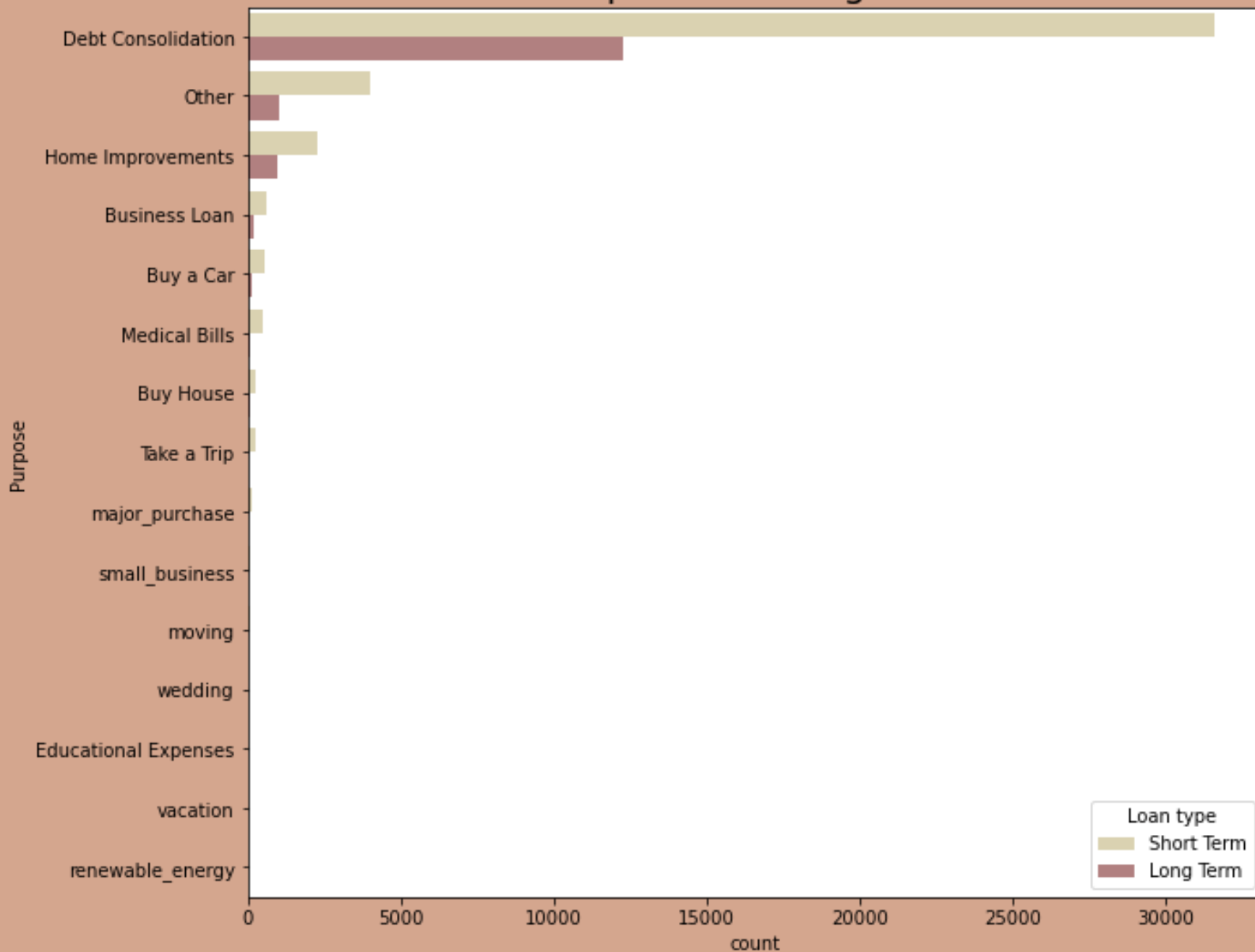


# **Data Visualization**

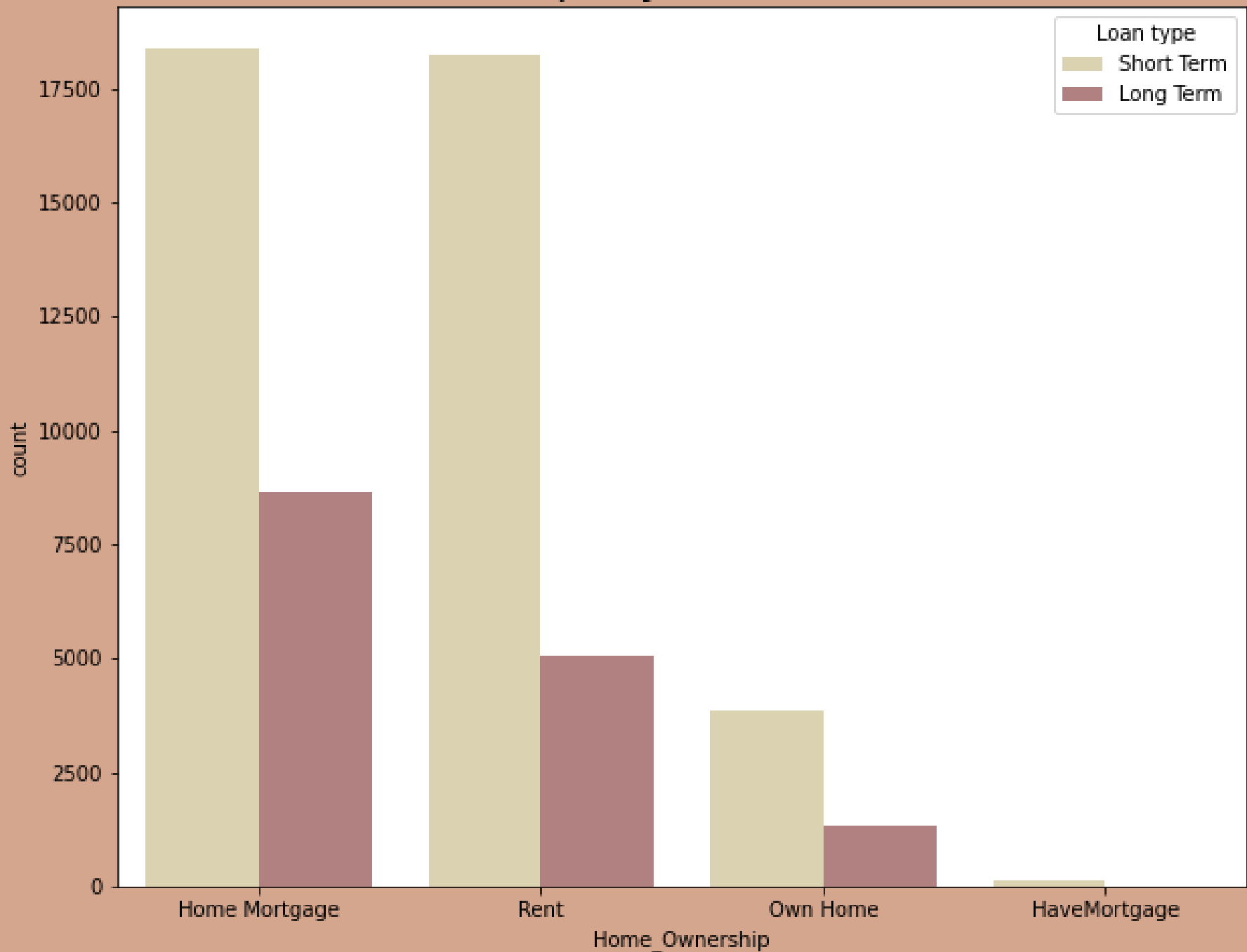




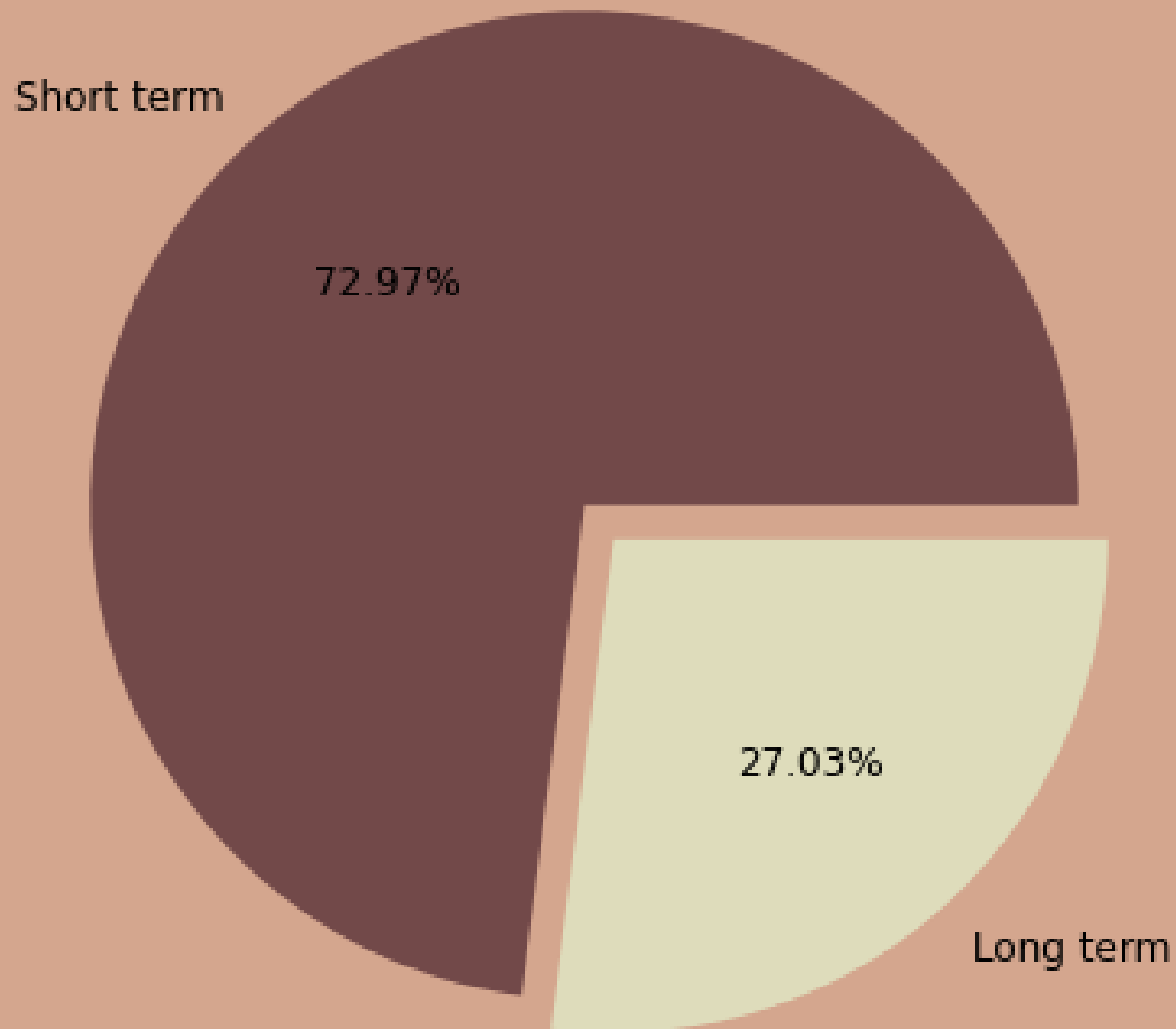
## Purpose of taking Loan



# Own Property vs Loan Status



## Time Period of Taking Loan



# Classification Models

50%



# Logistic Regression

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# KNN Model

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# Decision Tree Classifier

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# Random Forest Classifier

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**Extra Tree**

**Stacking**



**Bagging**

**Boosting**

**Voting Classifier (HARD)**









# *Thank You*

FOR YOUR TIME

