

**upGrad**



# CREDIT EDA CASE STUDY

(ANALYSIS AND OBSERVATIONS)

By-

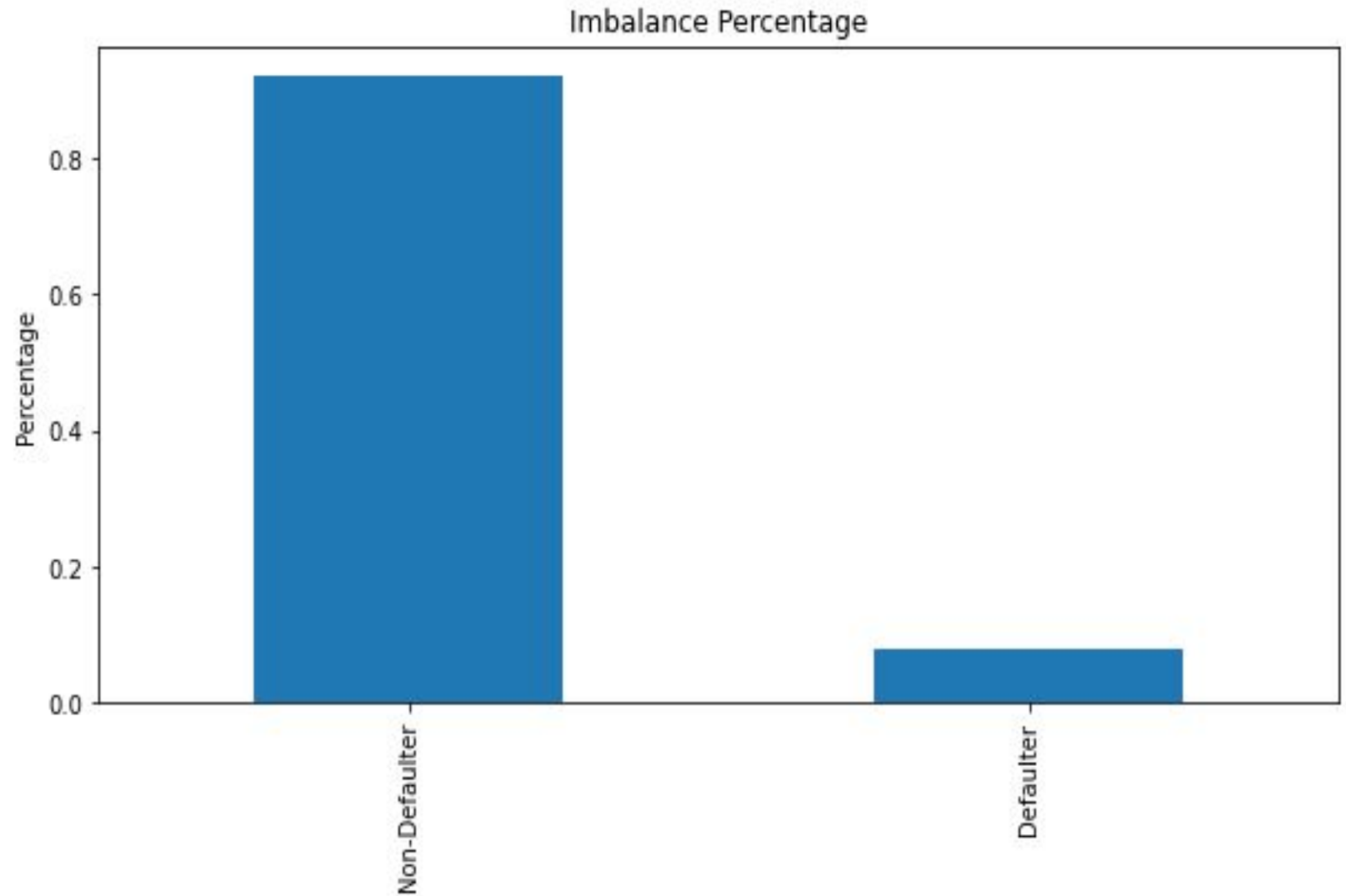
UTKARSH WADHWA

SRIJAN MEHTA

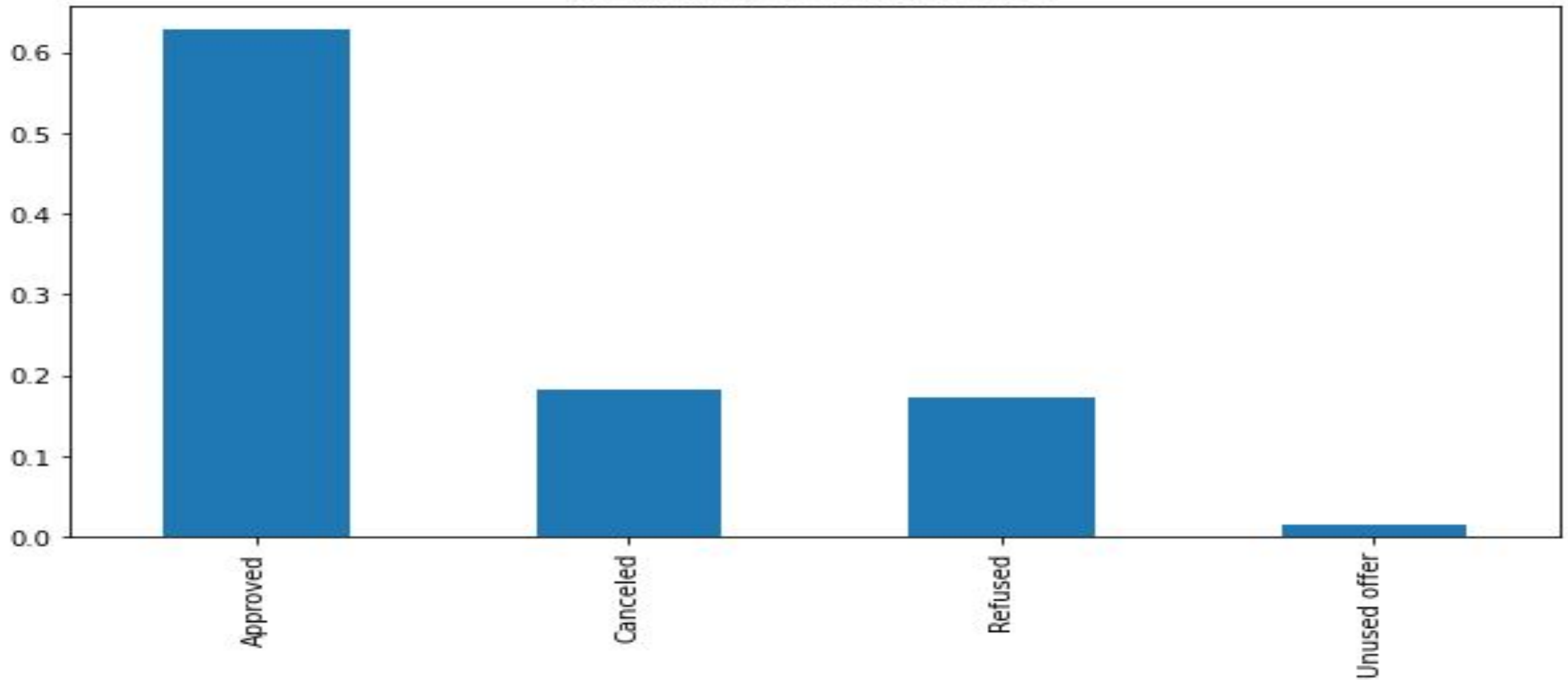
## Imbalance Percentage

-Target variable divides the applicants into defaulters(Target=1) and non-defaulters(Target=0).

-Approximately 92% people are not defaulters whereas 8% people are defaulters.



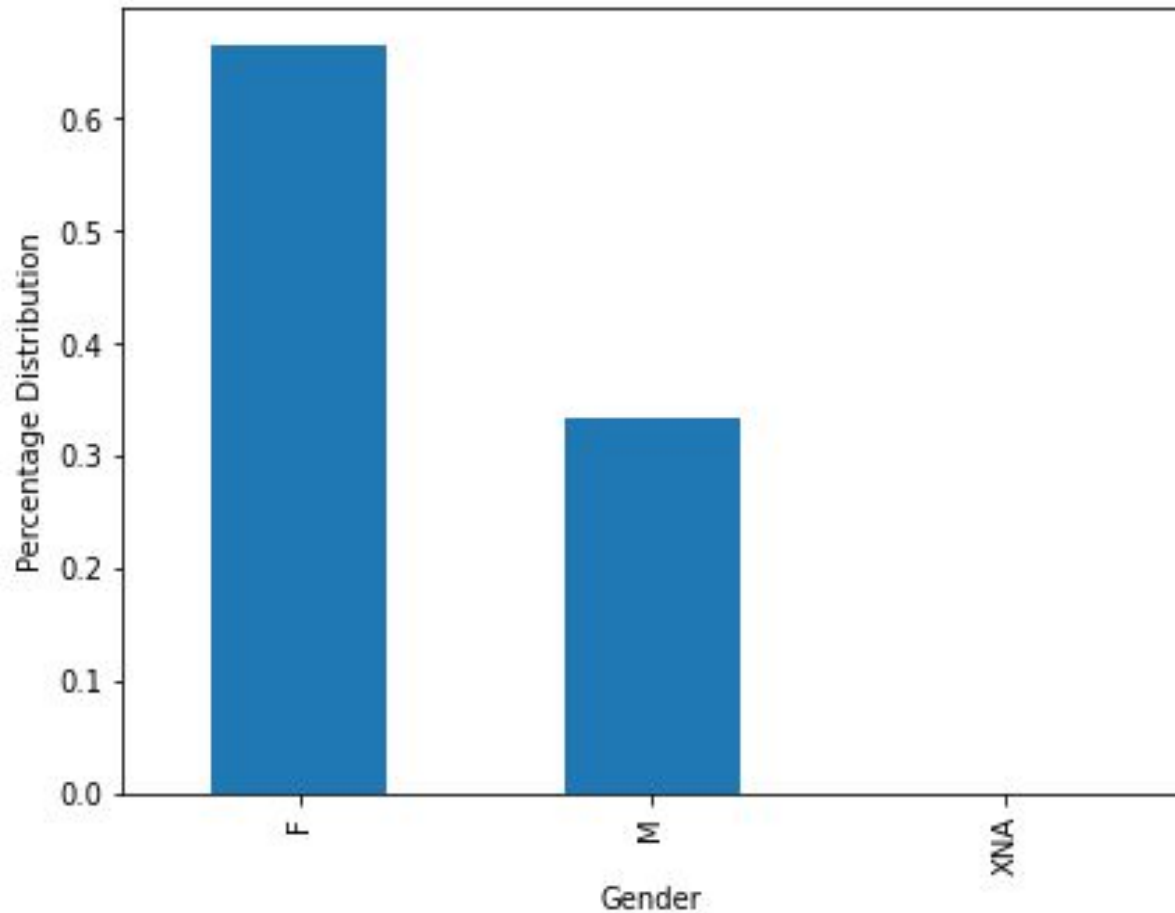
Distribution of Contract Status



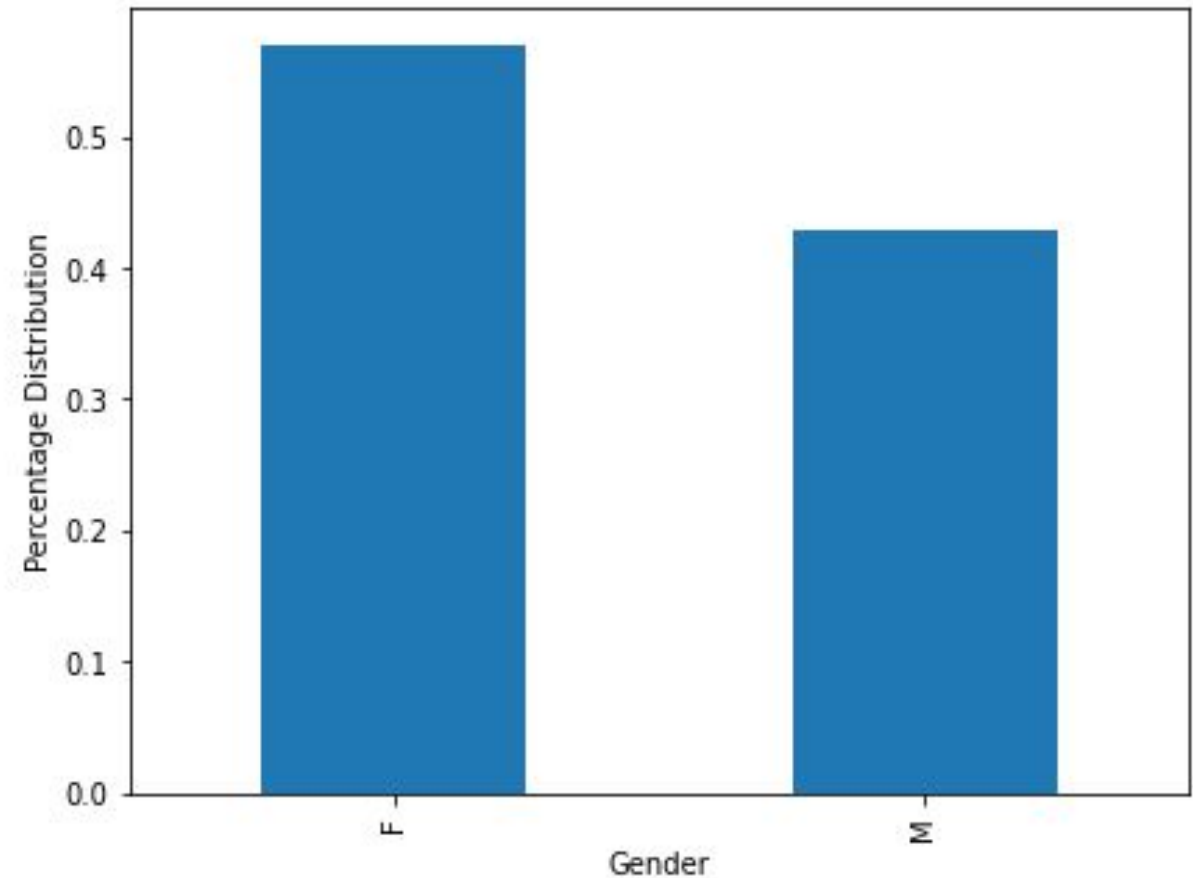
### Contract Status

- Majority of the loans applications were approved previously.
- Canceled and Approved loans applications are almost same.

Gender wise distribution of NON-DEFAULTERS

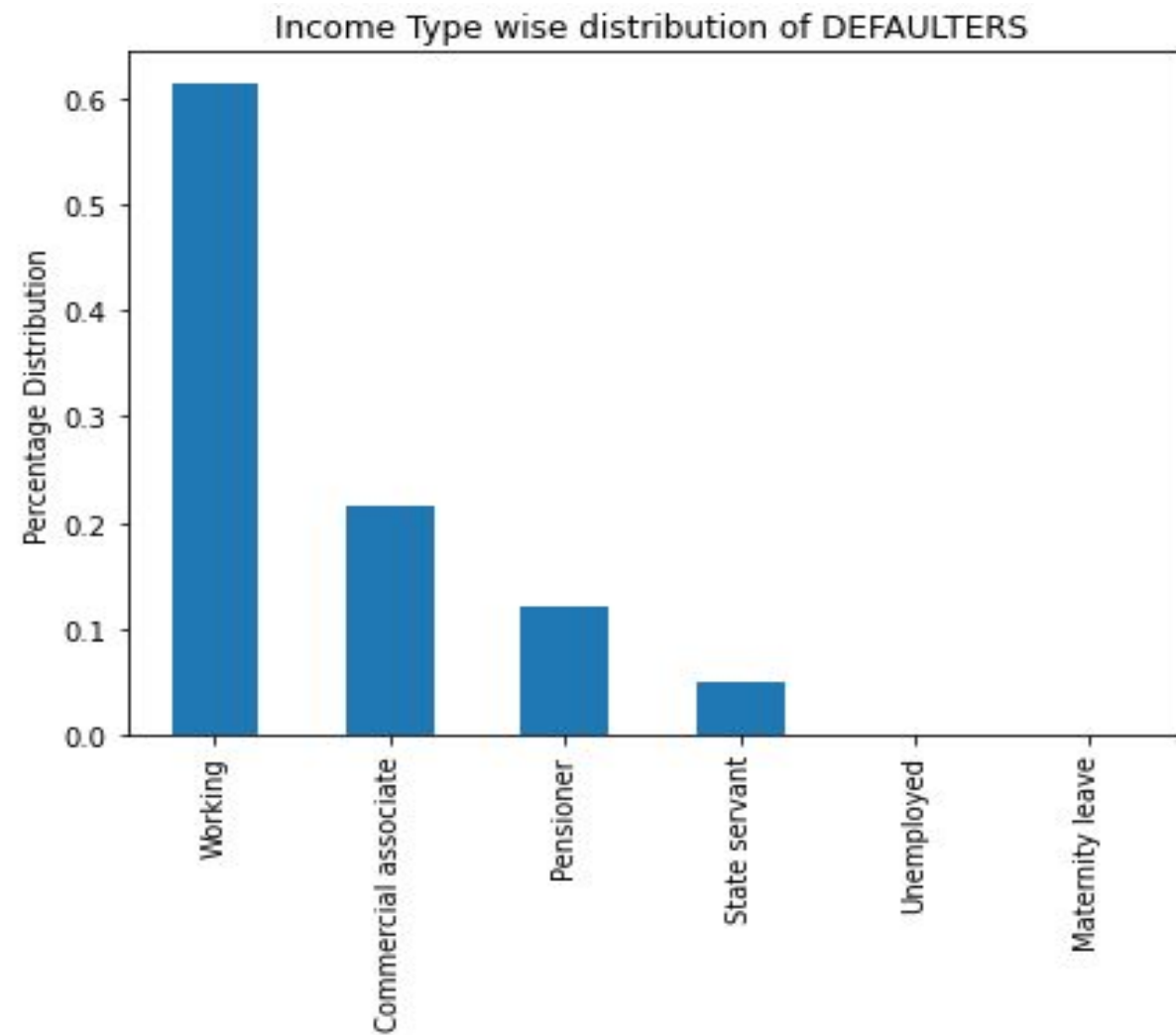
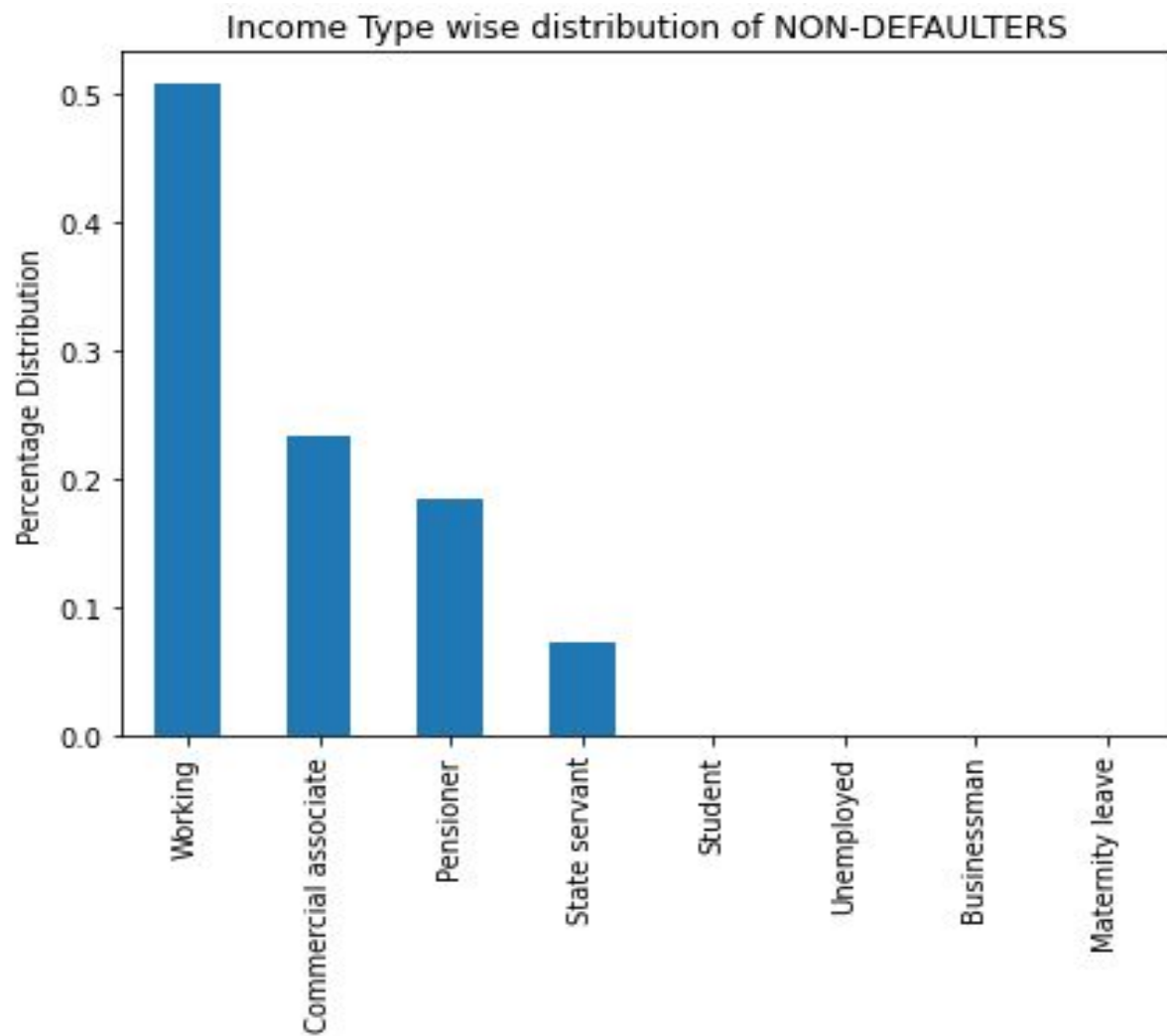


Gender wise distribution of DEFAULTERS



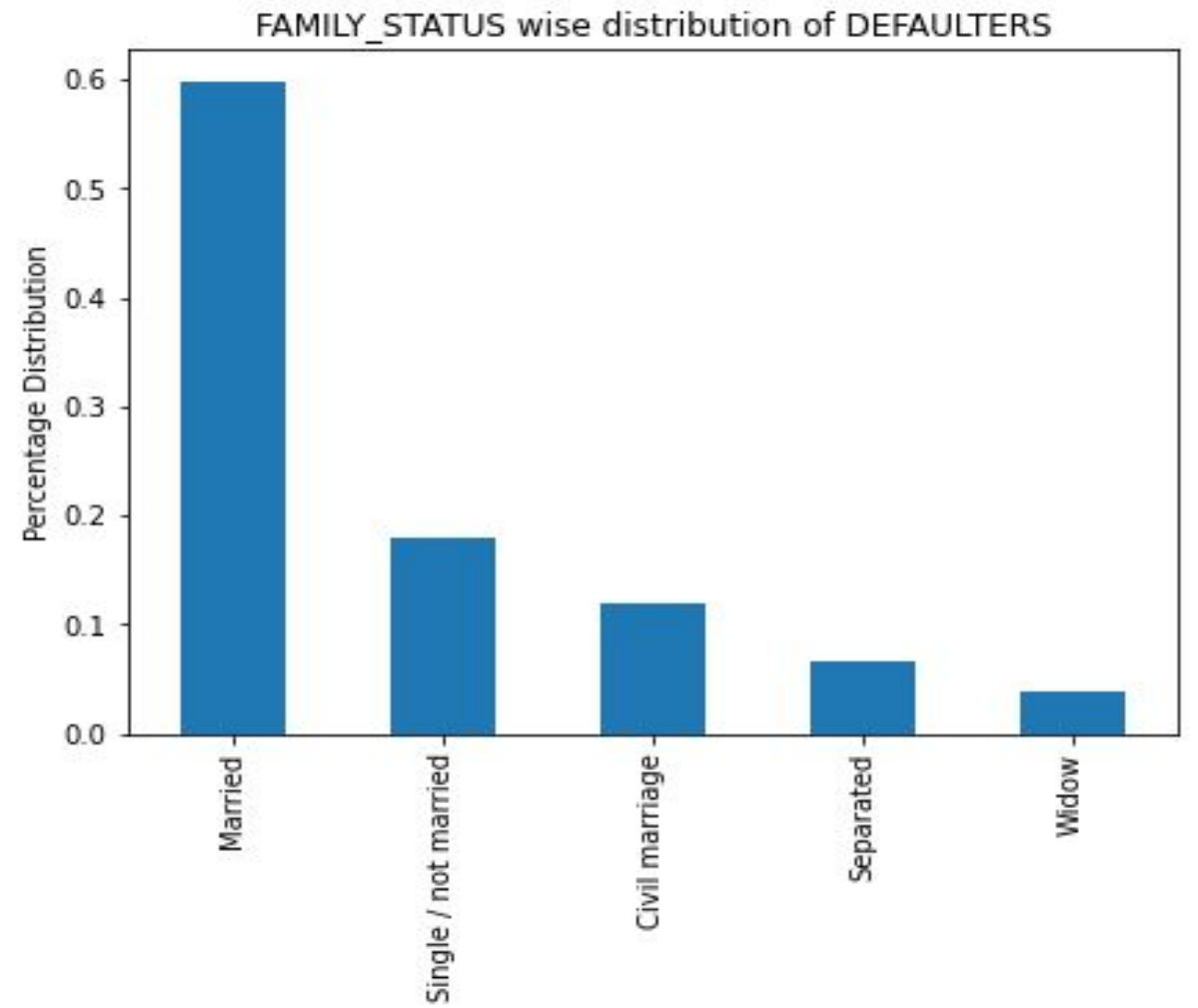
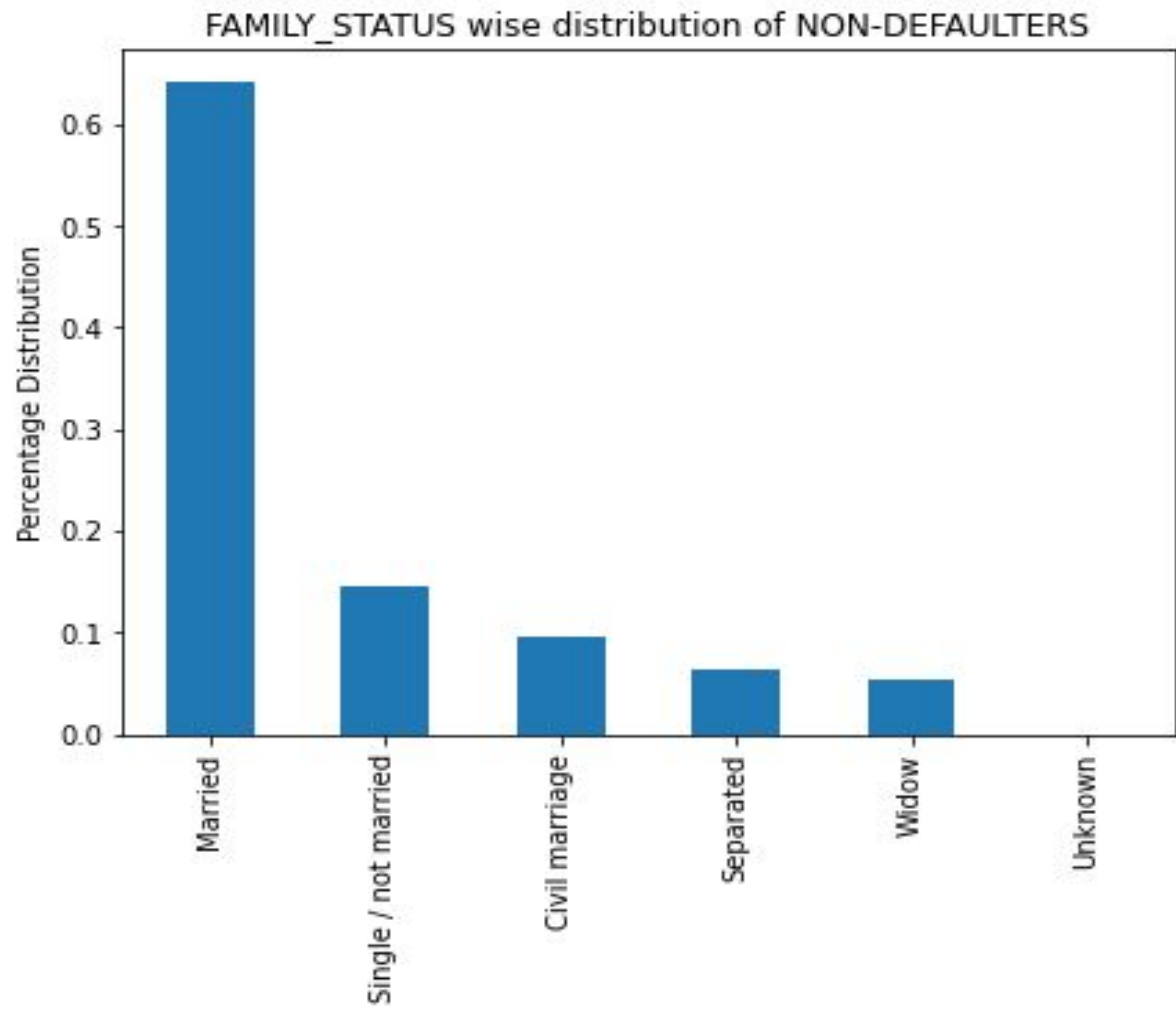
## Gender Wise Distribution

- Number of females are more than males in both defaulters and non-defaulters which also highlights that females are opting more for loan as compared to males.
- There is a higher percentage of males in defaulters list as compared to non-defaulters.
- There is a higher percentage of females in non-defaulters list as compared to defaulters.



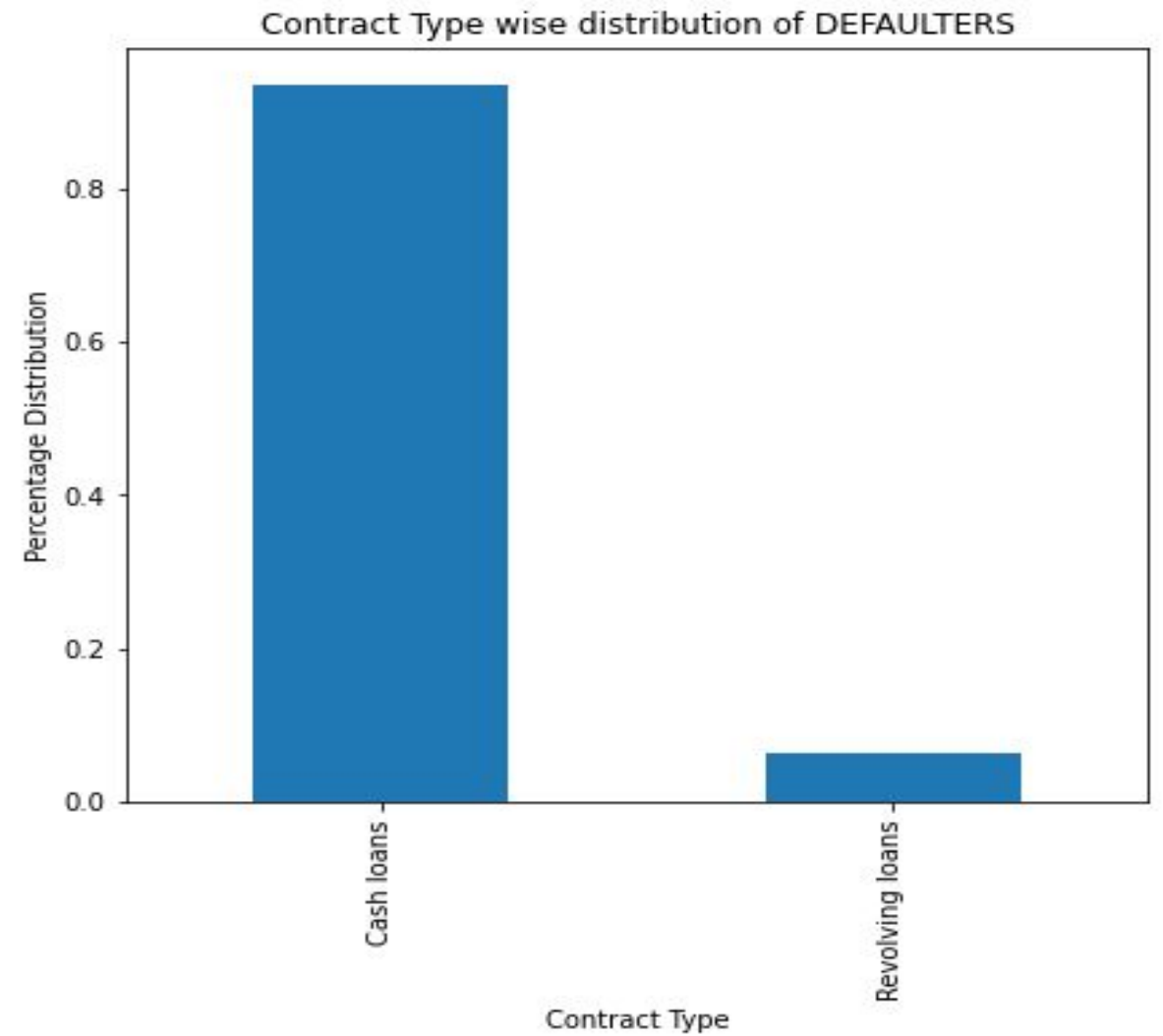
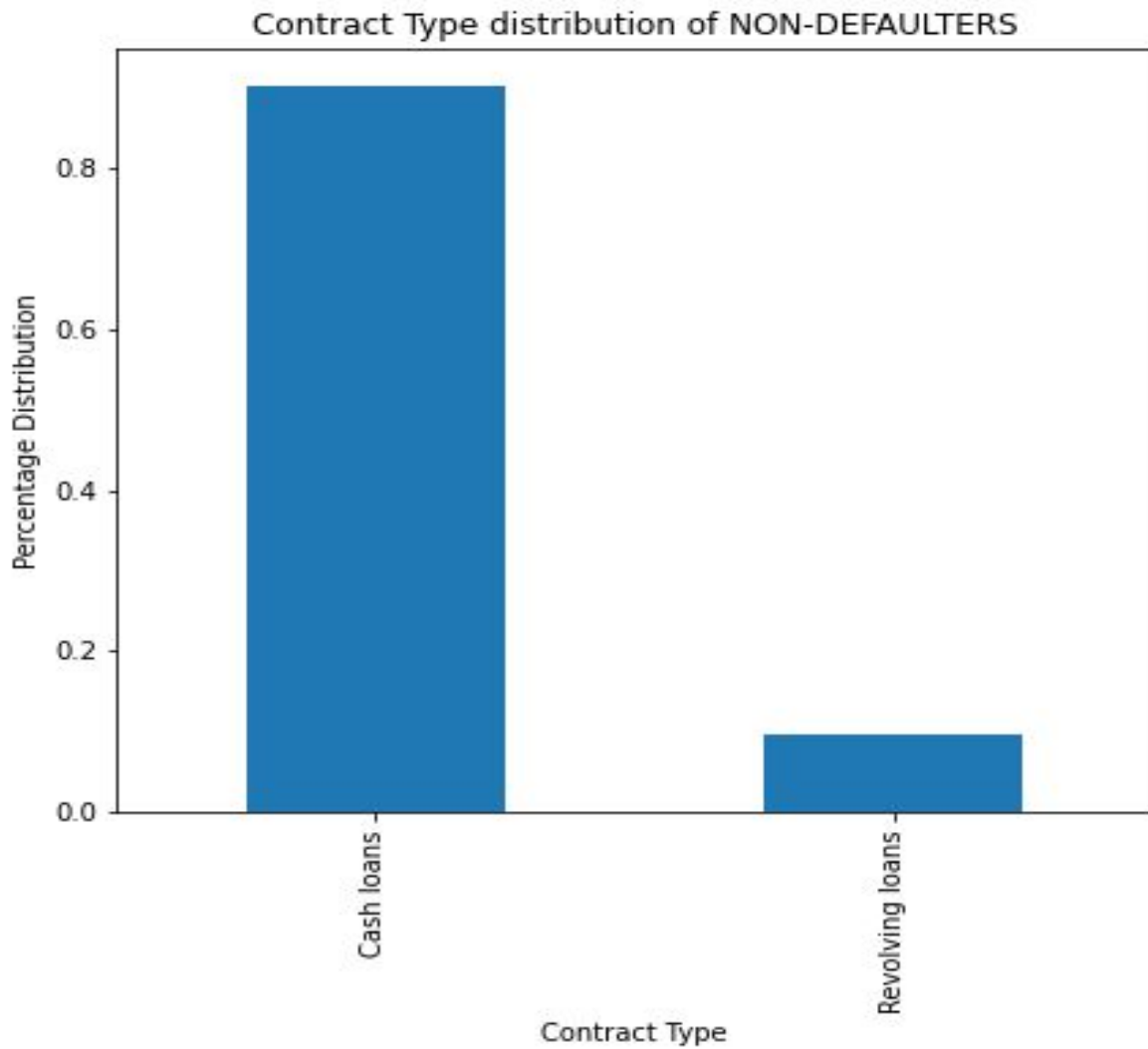
## Income Type

- Working professionals are applying more for loans and have higher percentage in defaulters list.
- While in all other income types like Pensioners, Commercial associate, State Servants, distribution towards non-defaulters is more than defaulters.



## Family Status

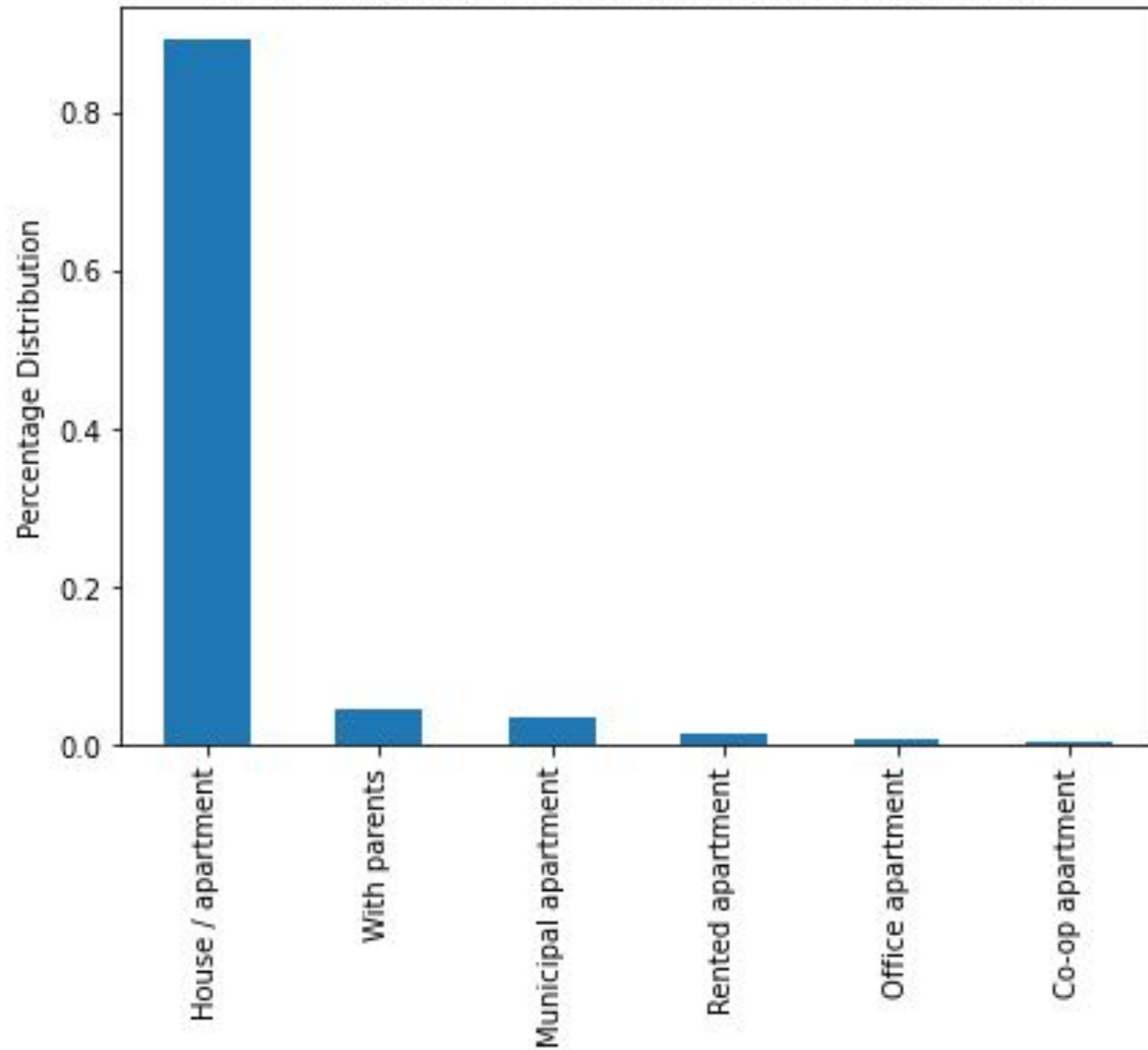
- Single / not married people are at high risk of being a defaulter.
- Married people are taking more loans than any other segment.
- People with Civil marriage as well holds a high chance of being defaulters.



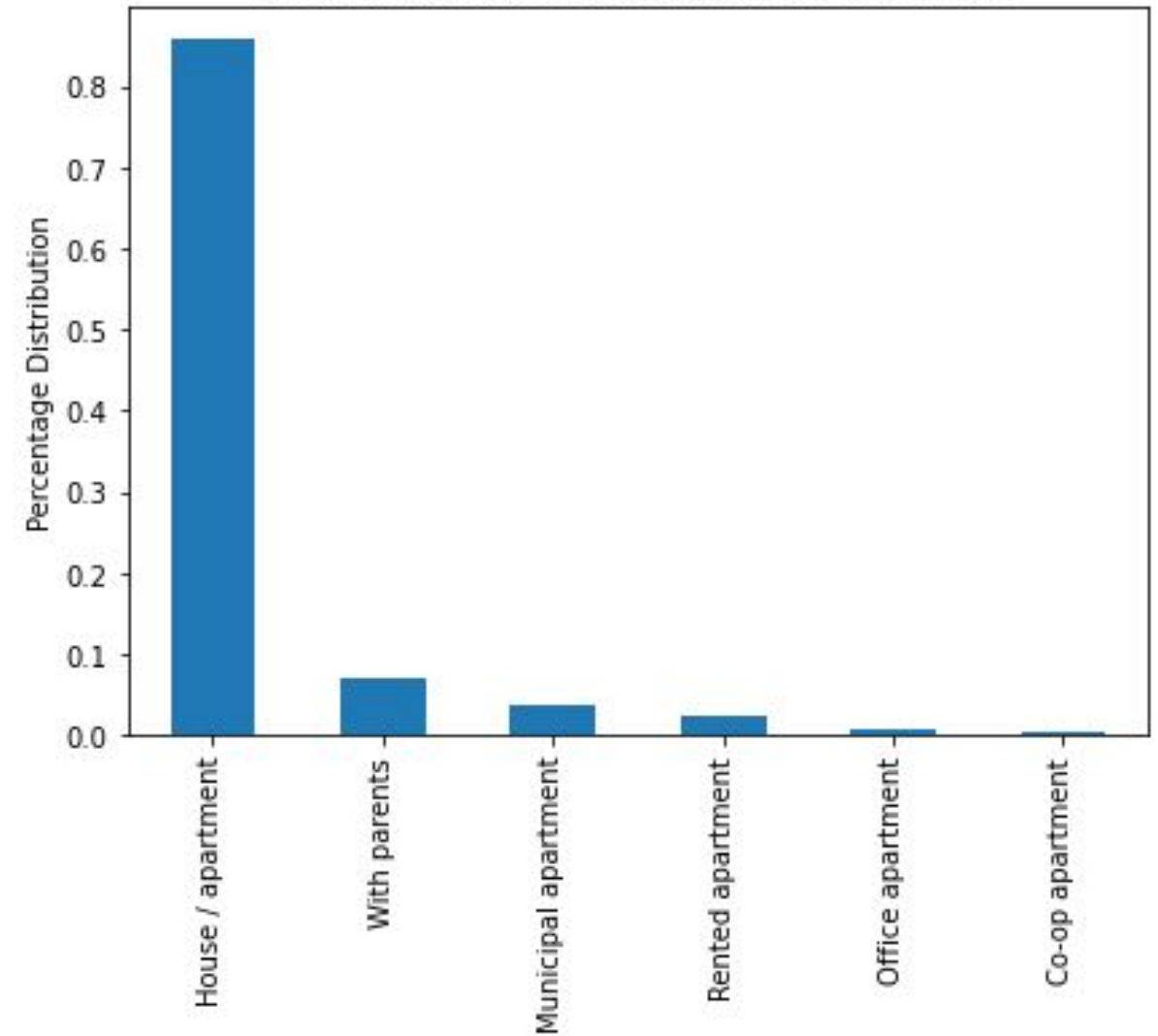
## Contract Type

- People applying for cash loans are at higher risk of being defaulter.
- Revolving loans seems to be a better choice where chances of default is low compared to cash.

Housing Type wise distribution of NON-DEFAULTERS



Housing Type wise distribution of DEFAULTERS

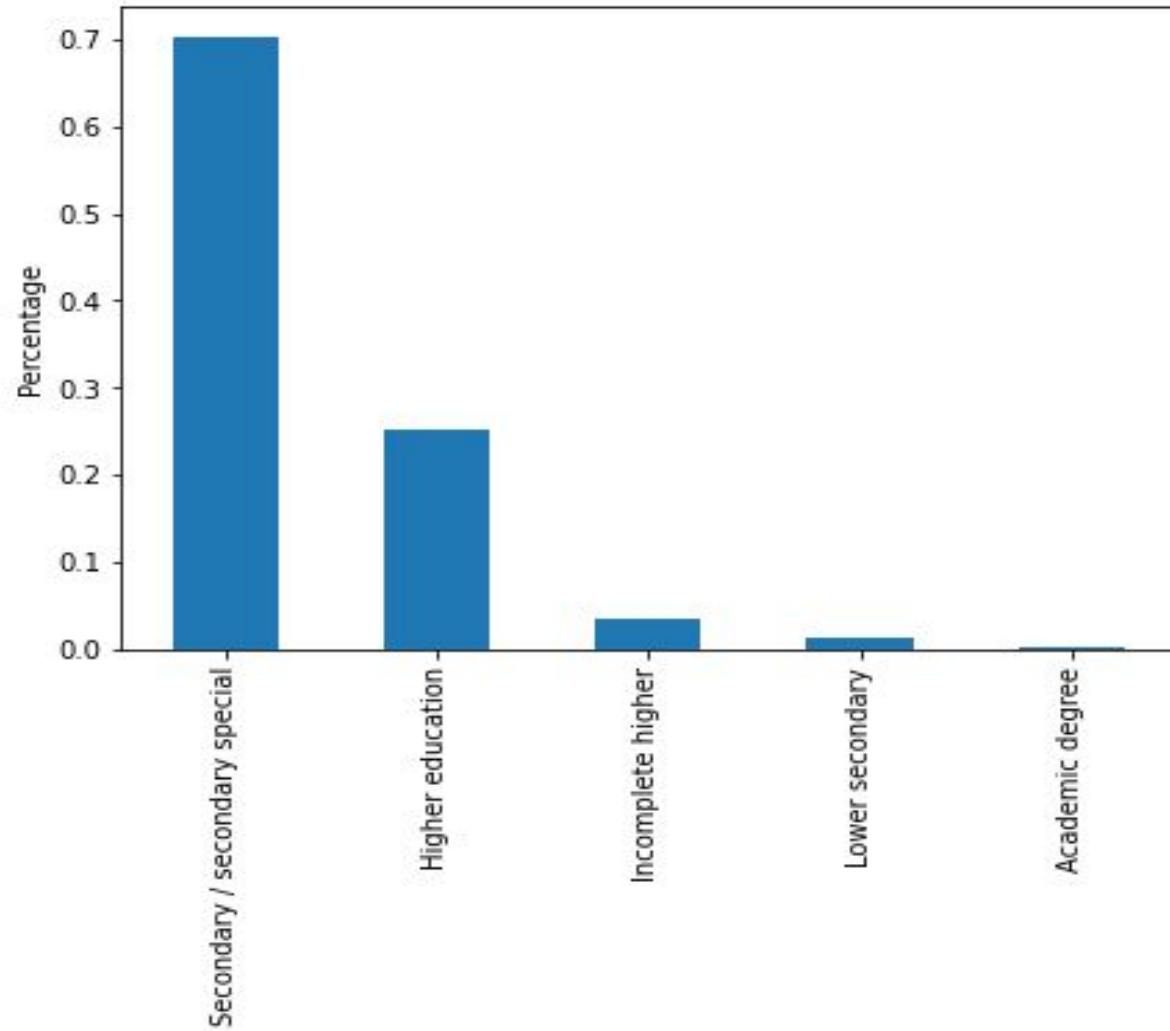


## Housing Type

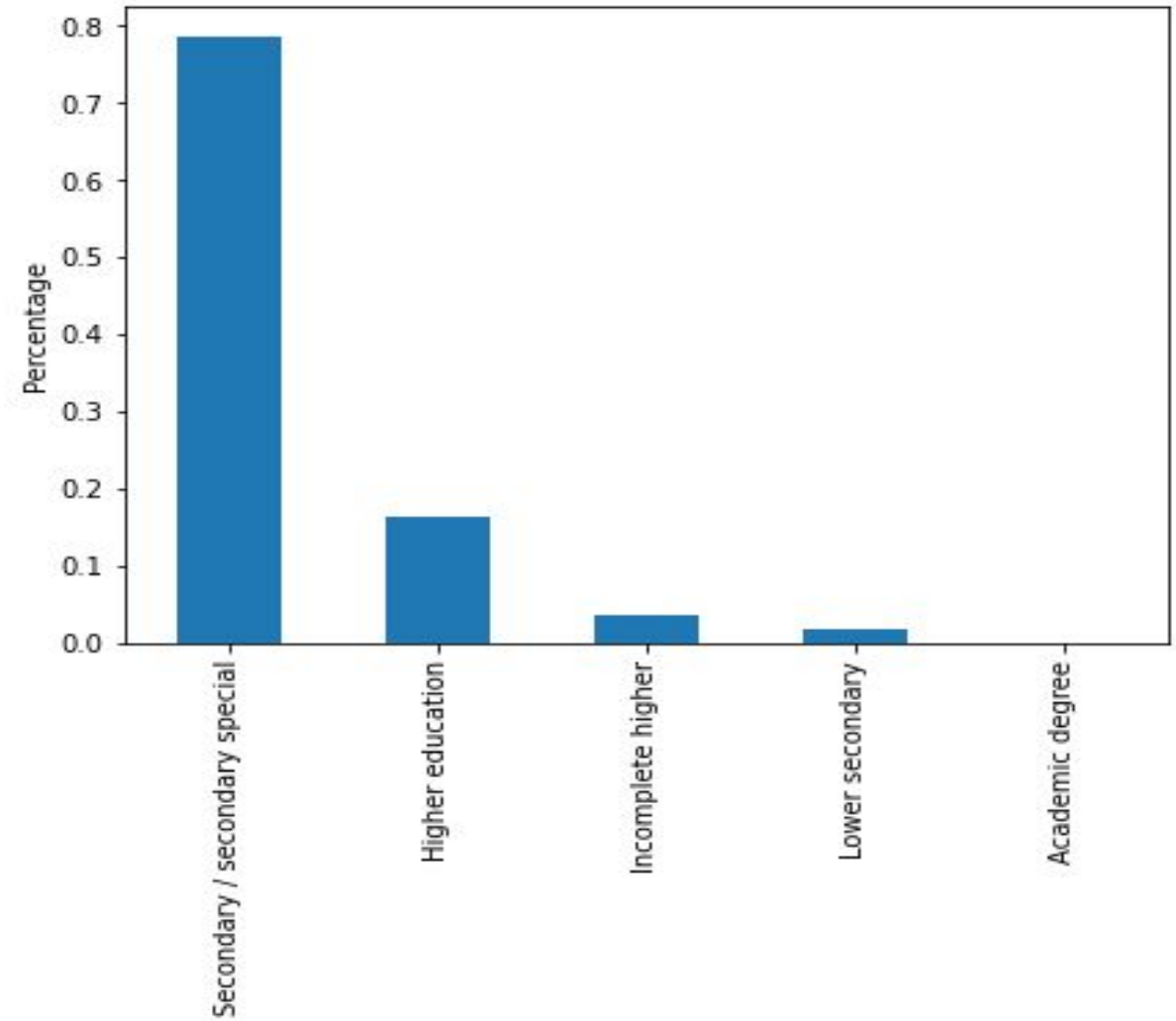
- People living on rent or living with parents have higher percentage in Defaulters list as compared to Non-Defaulters List.



Education wise distribution of NON-DEFAULTERS



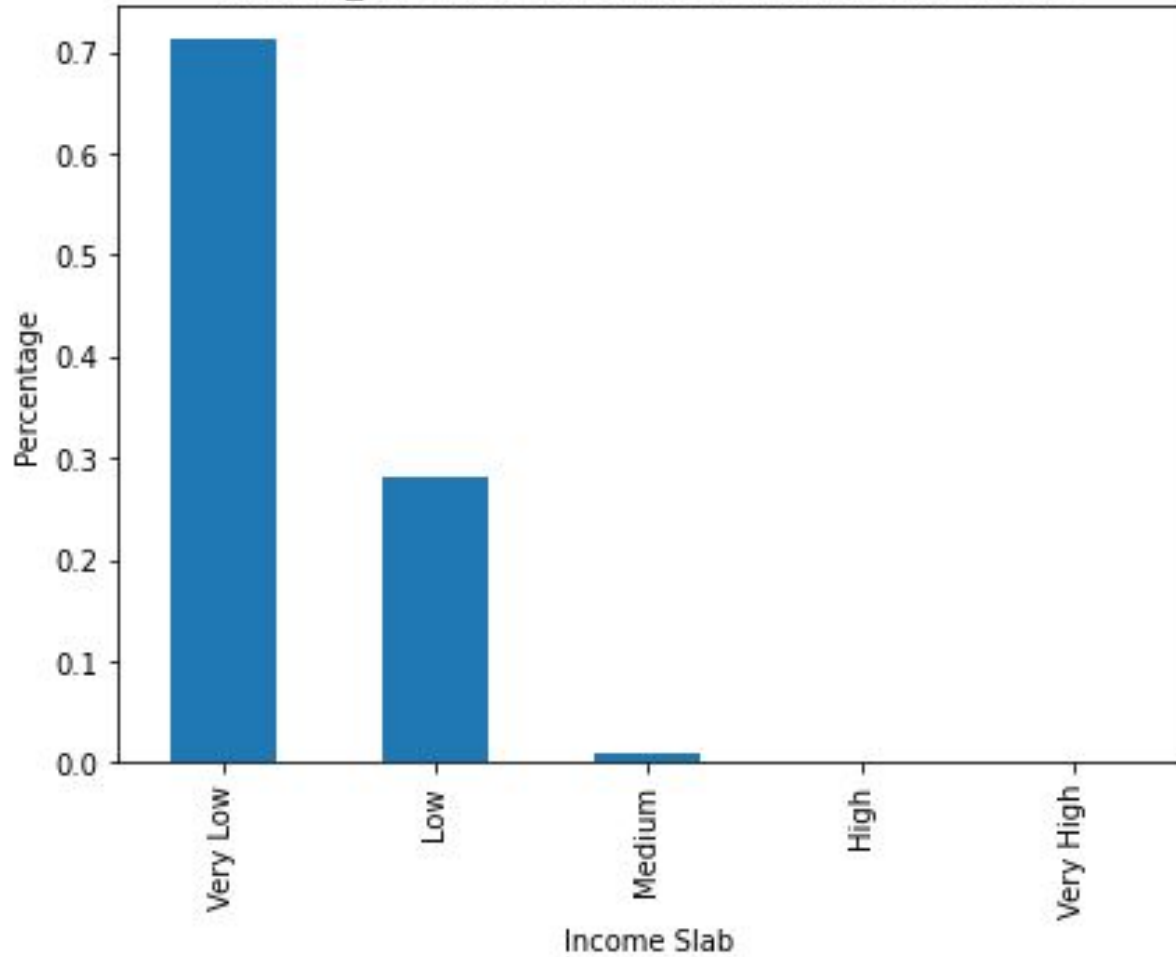
Education wise distribution of DEFAULTERS



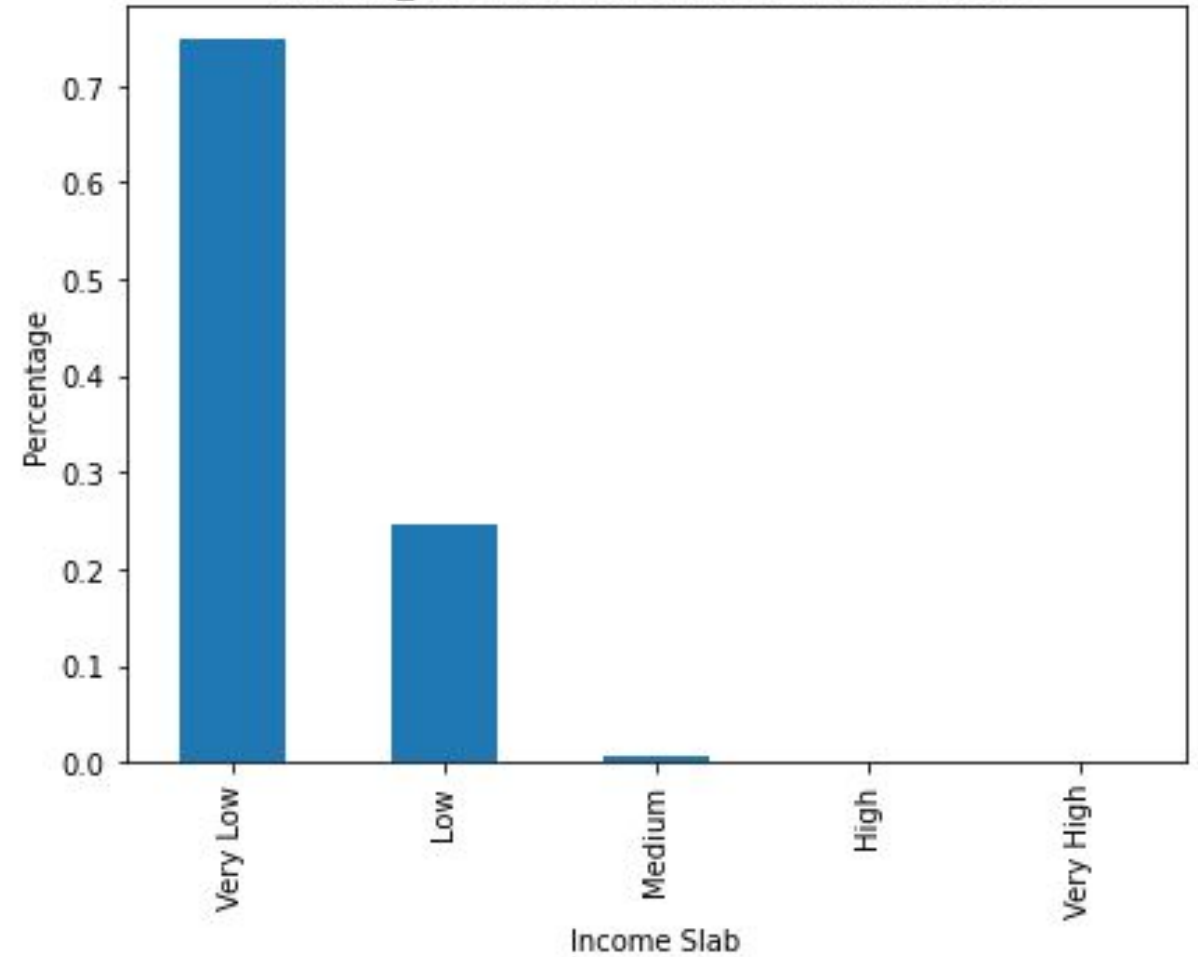
## Education

- People with Secondary/ secondary special education are having high percentage in defaulters list.
- People with Higher education are less defaulters as compared to non-defaulters.

Income\_Slab wise distribution of NON-DEFAULTERS



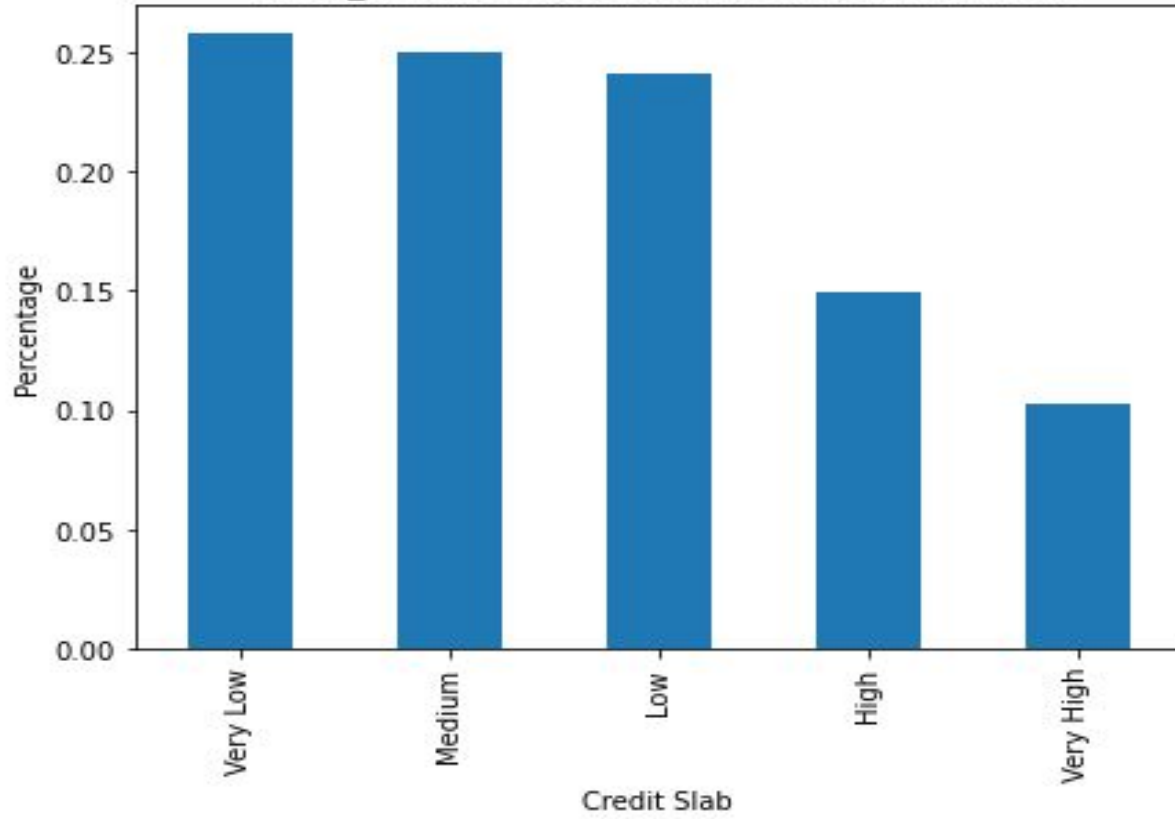
Income\_Slab wise distribution of DEFAULTERS



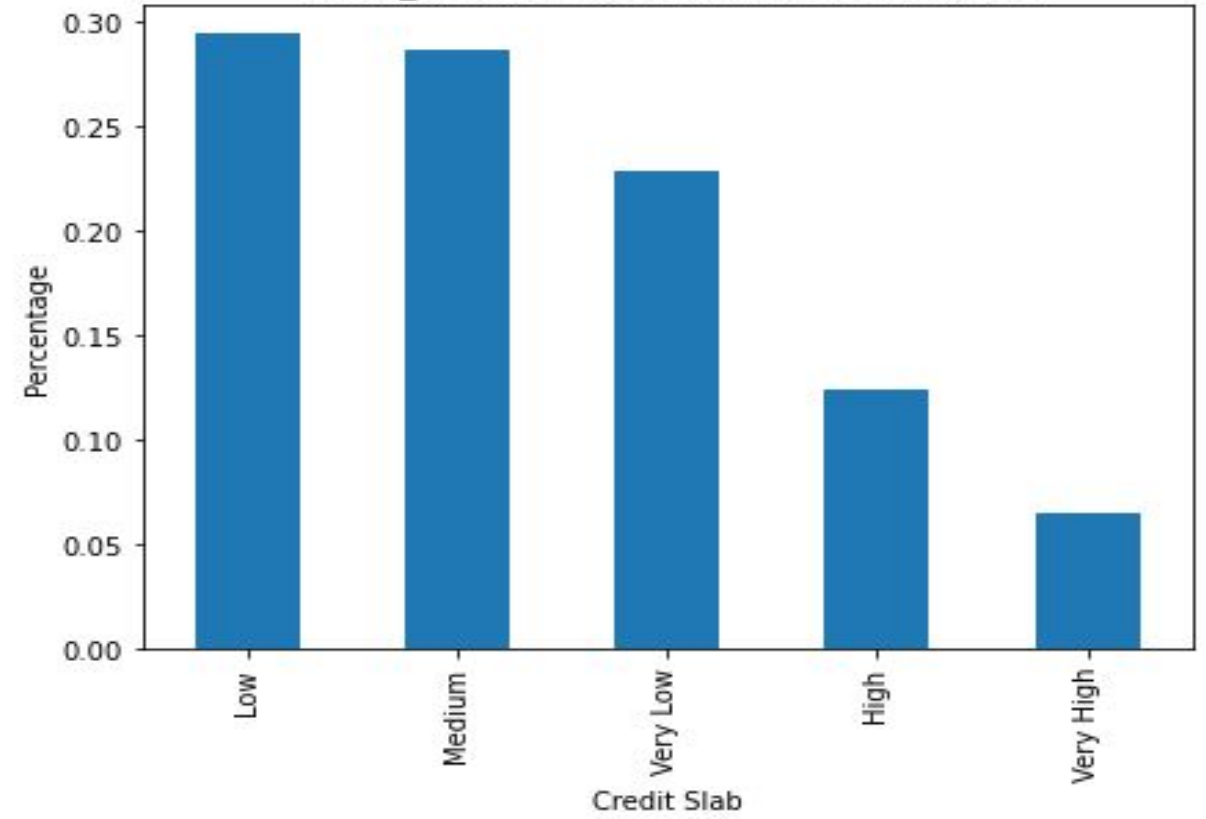
## Income Slab

- People with very low incomes are having higher percentage of defaulters.
- People with very high incomes are having lower percentage of defaulters.

Credit\_Slab wise distribution of NON-DEFAULTERS



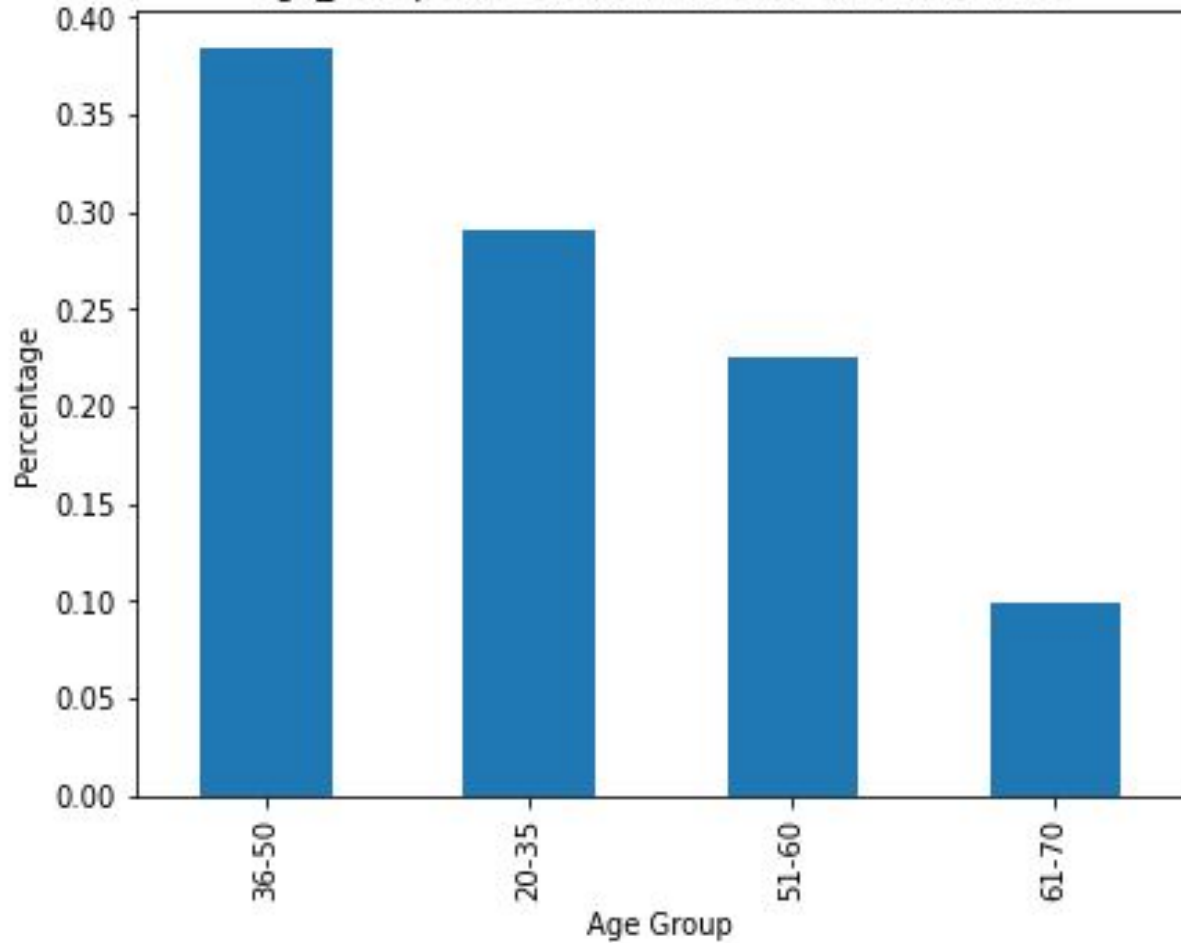
Credit\_Slab wise distribution of DEFAULTERS



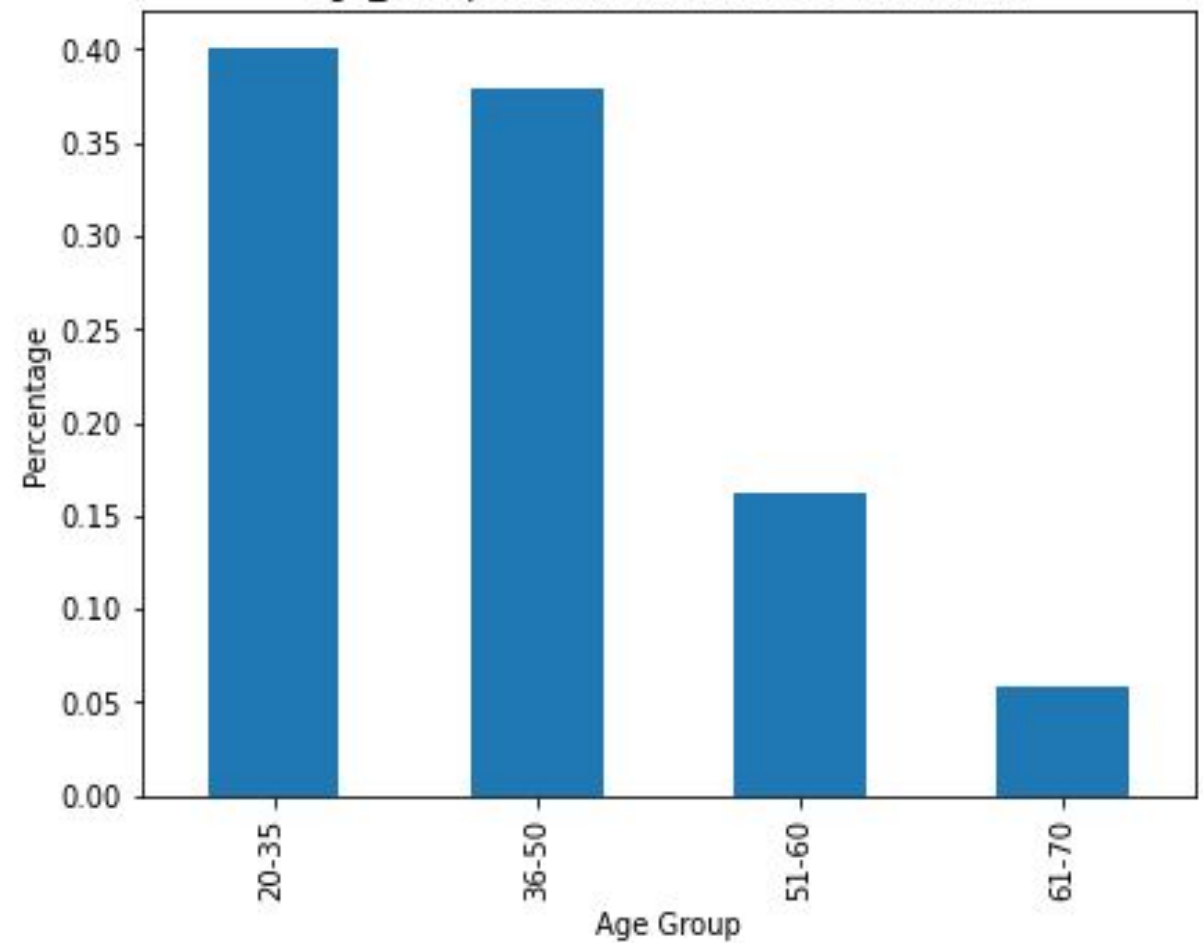
## Credit Slab

- People lying in medium slab of credit amount and in low slab of credit amount are at higher risk of being defaulter.
- Very high credit slab people have the less chances of being defaulters and same is applicable to high credit slab people.
- We have to keep a tap on the people falling in the medium and low credit slabs.

Age\_Group wise distribution of NON-DEFAULTERS

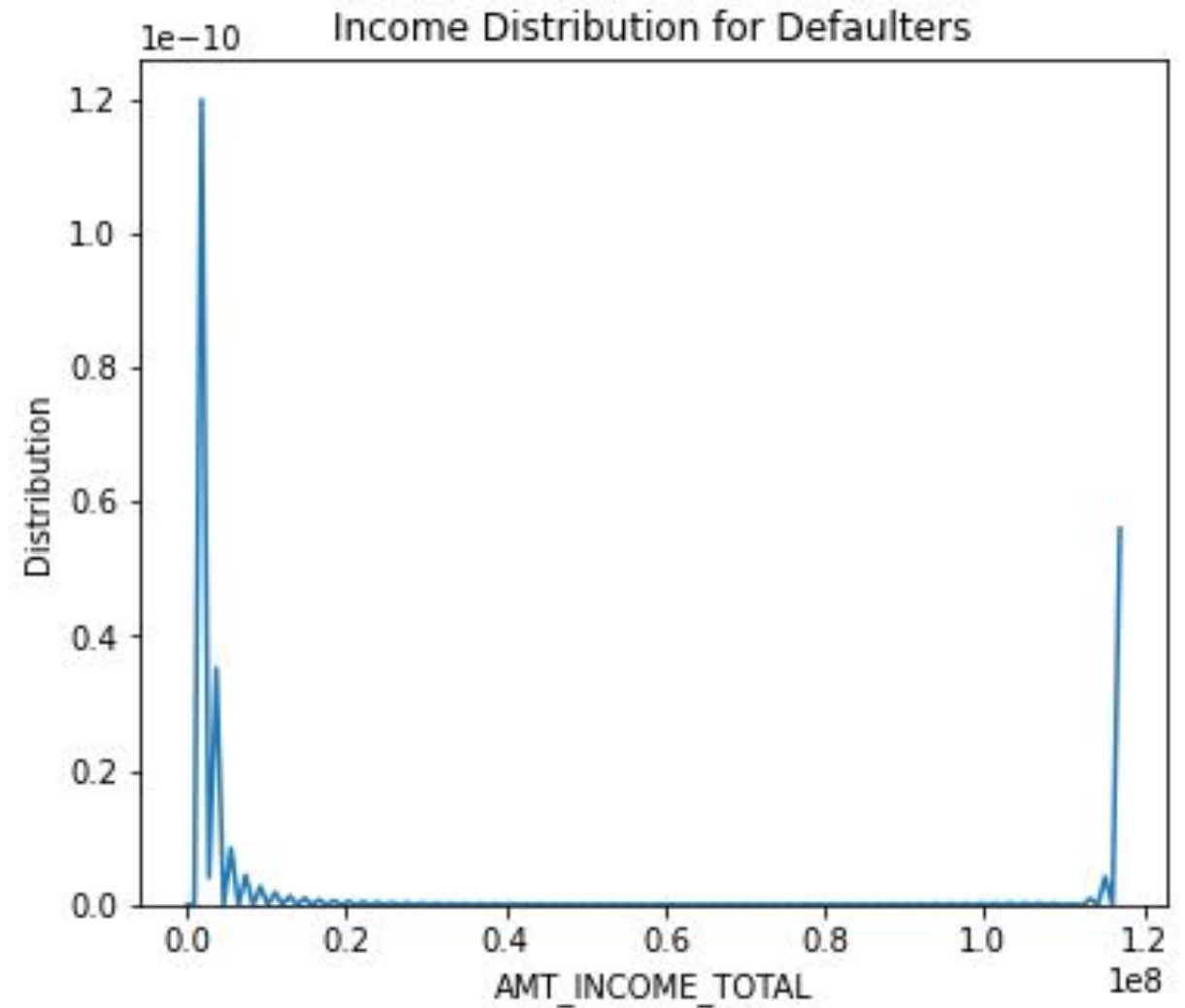
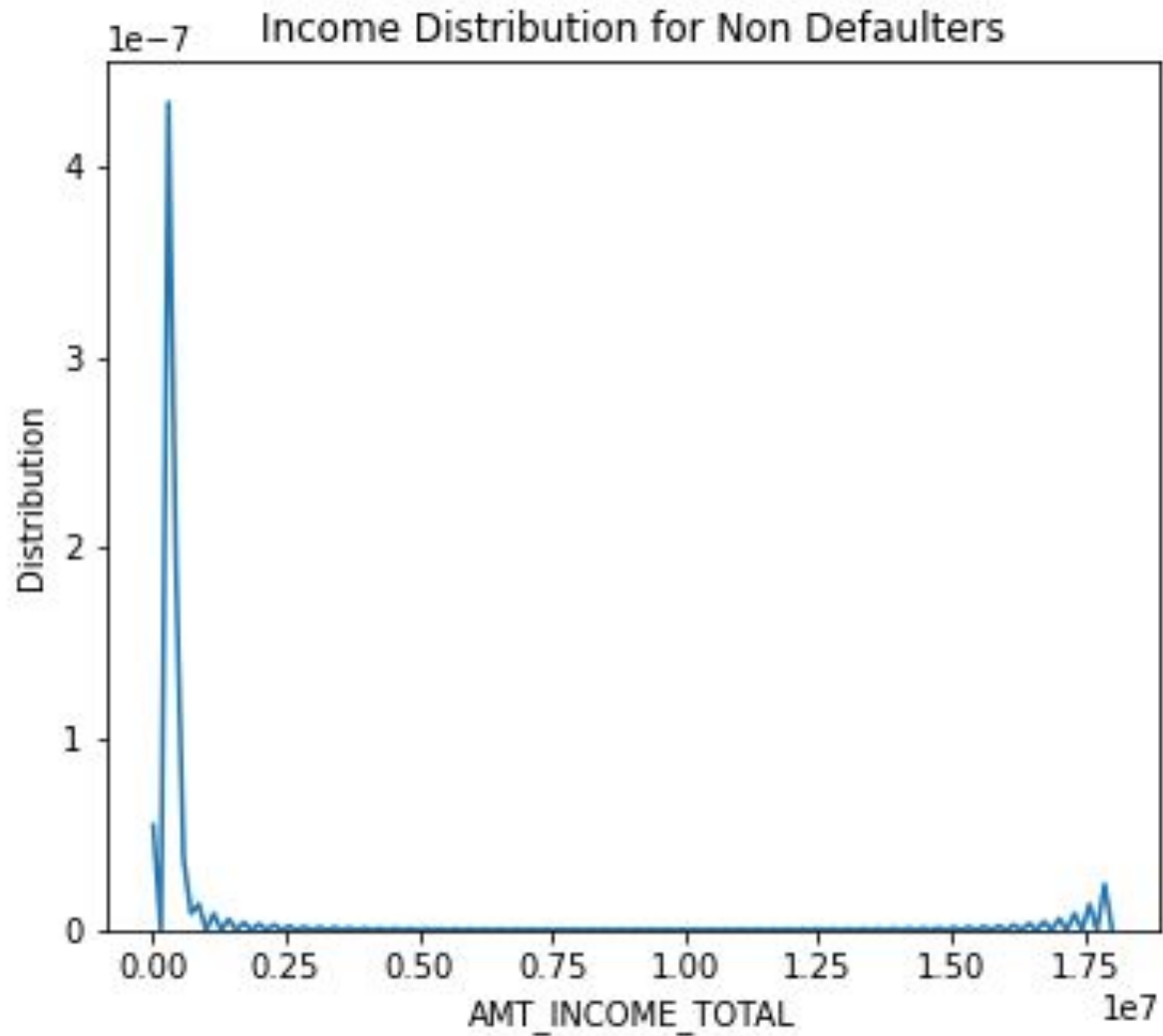


Age\_Group wise distribution of DEFAULTERS



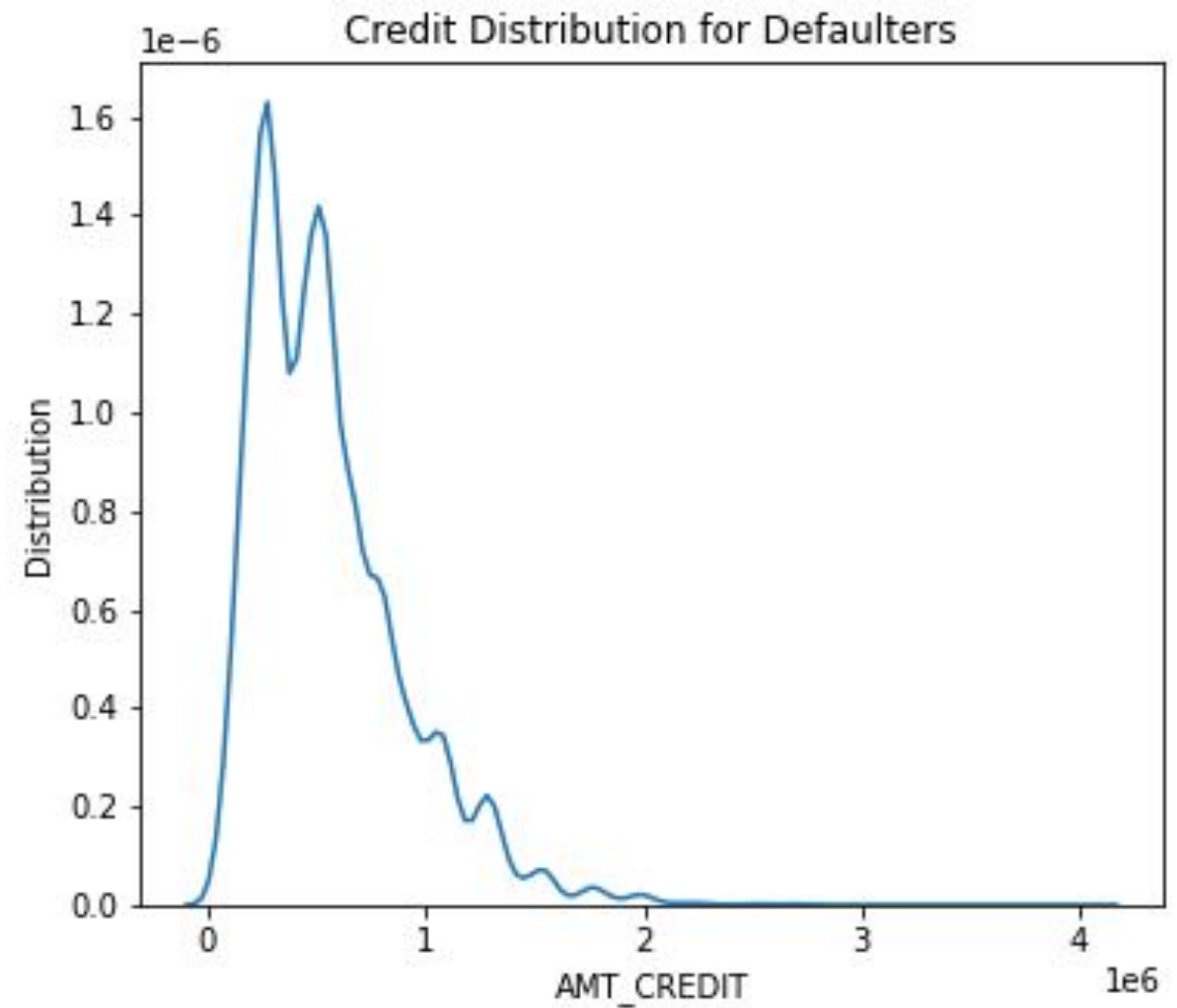
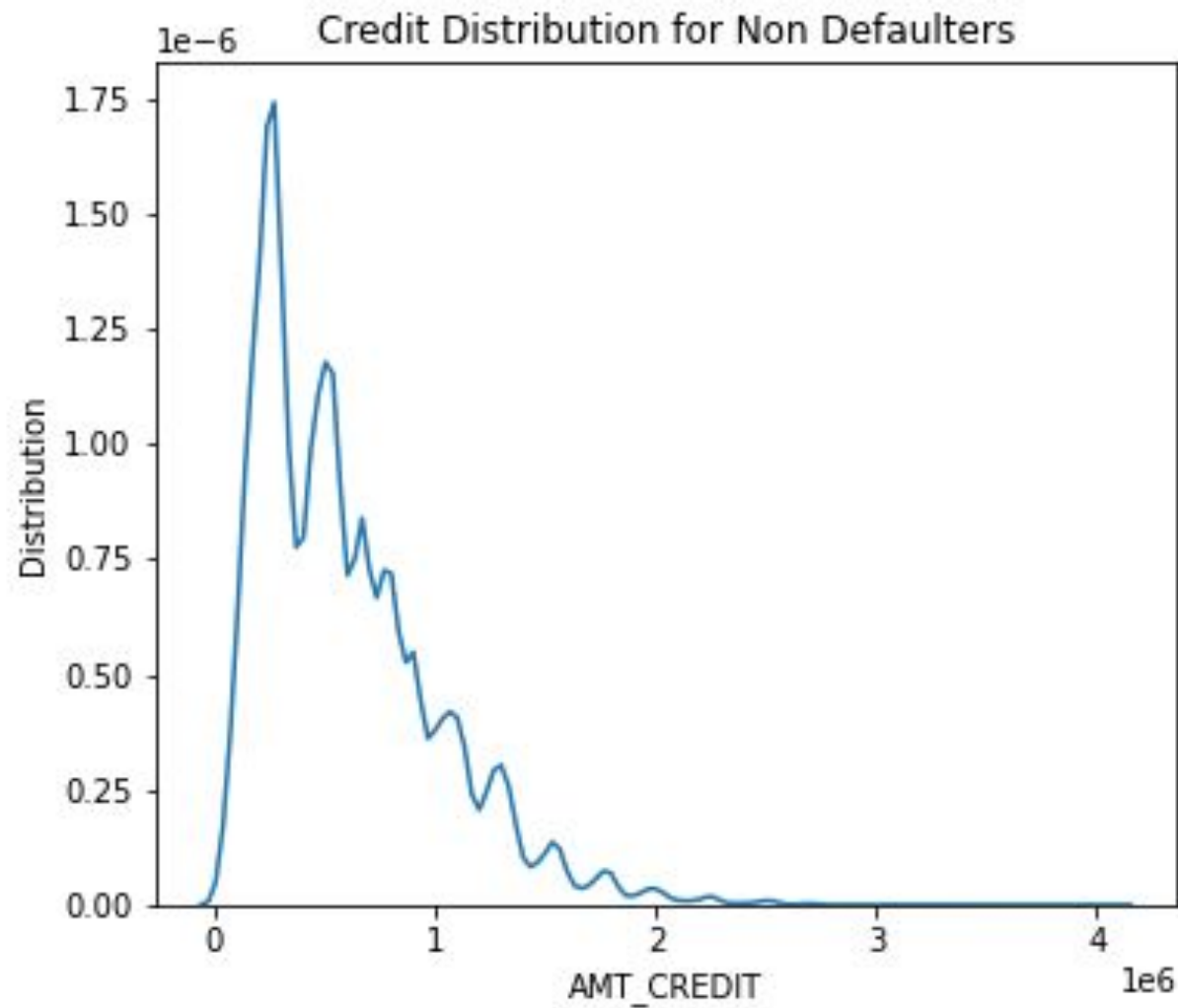
## Age Group

- Age segments 20-35 are having higher chances of being defaulters as seen from the above graph.
- While 51-60 being the best category for the loan where default chances appear less likely.



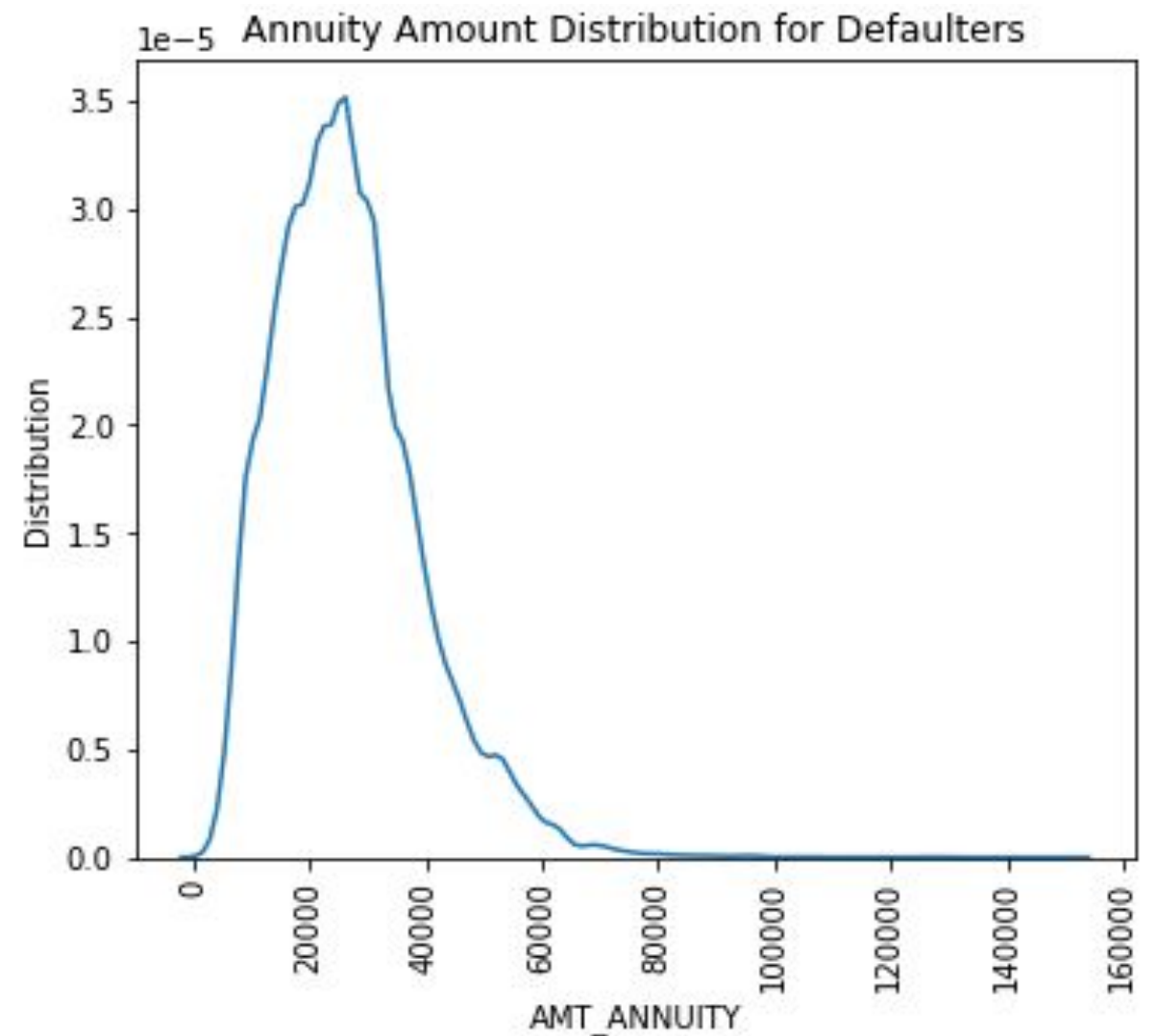
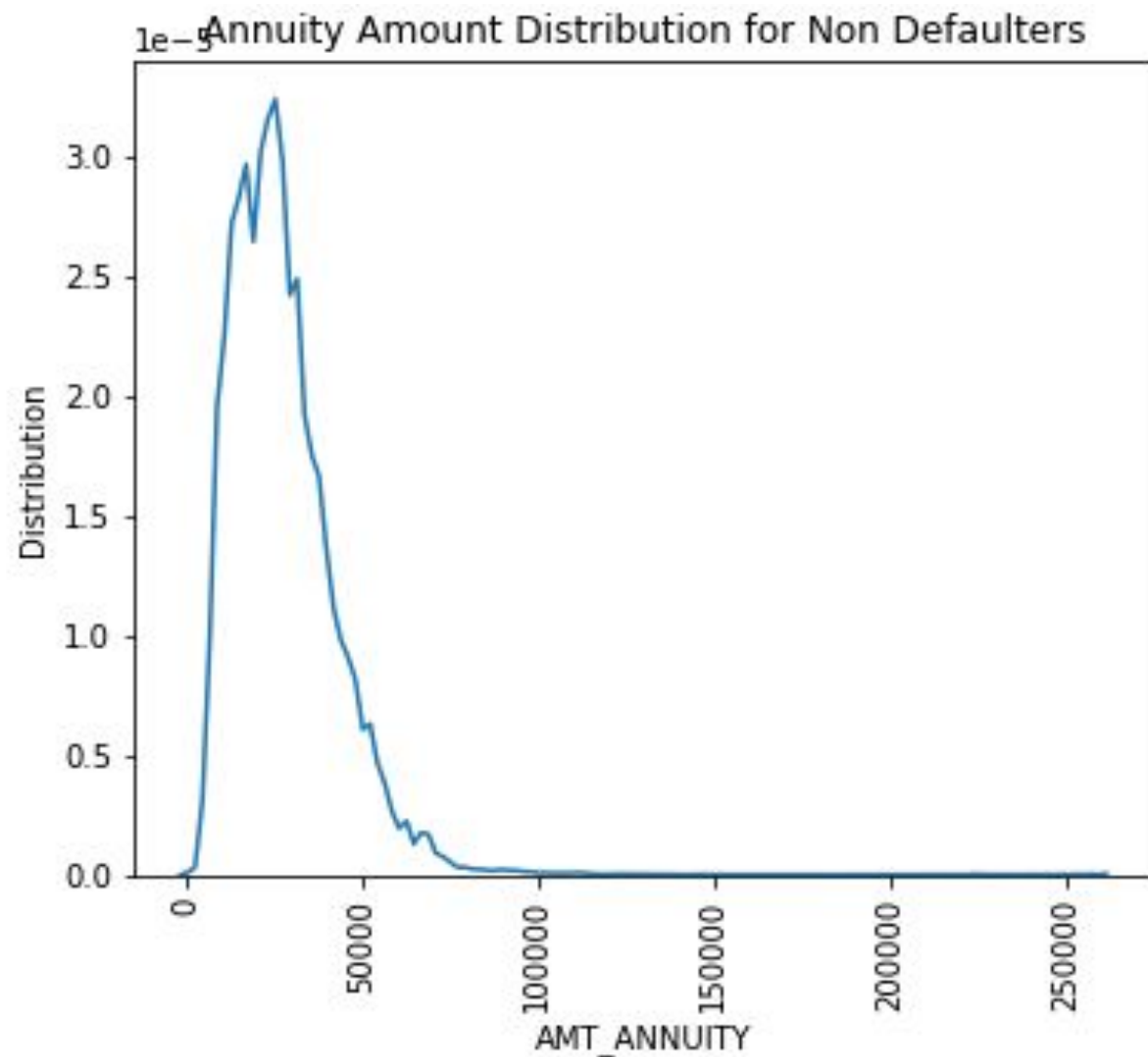
## Income Distribution

- People with low incomes are having higher proportion in defaulters list.
- People with higher incomes can be seen having higher percentage in defaulters list as well.



## Credit Distribution

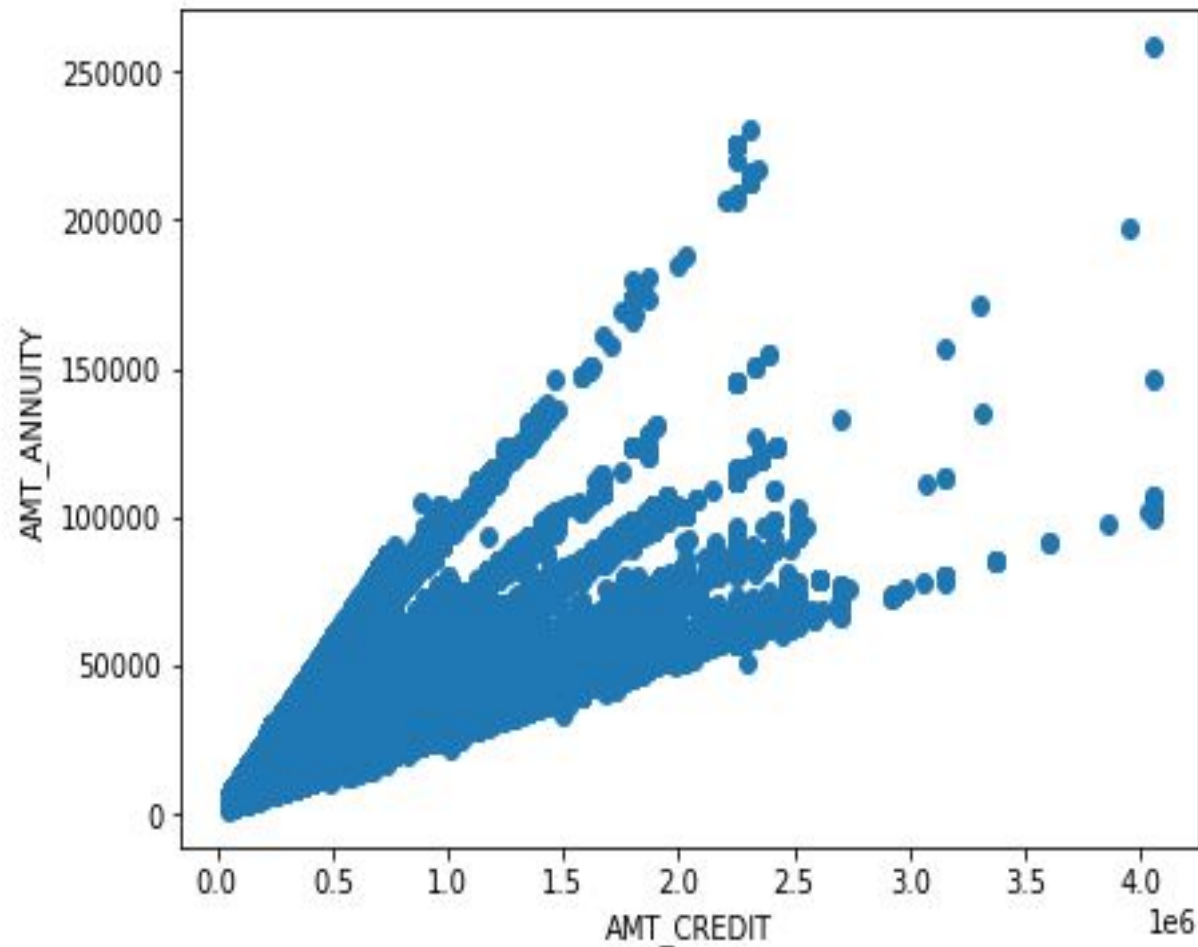
- Looks like people who default have taken the loan for low amounts.



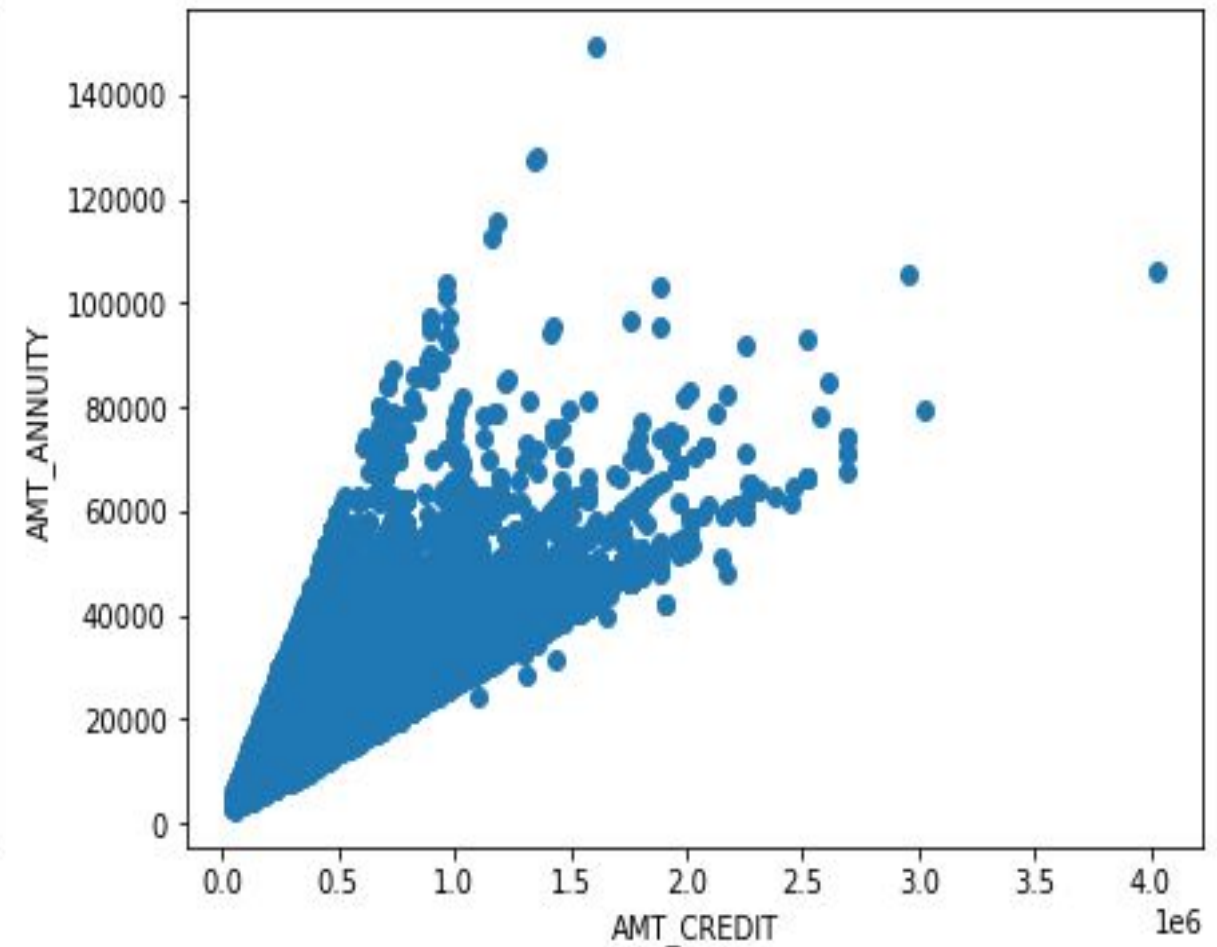
## Annuity Amount Distribution

- Maximum defaulters can be seen in range of 20000 to 40000 of Annuity Amount.
- There is decrease in number of defaulters having annuity amount beyond 40000

Comparison of Credit Amount and Annuity Amount for NON-DEFAULTERS



Comparison of Credit Amount and Annuity Amount for DEFAULTERS

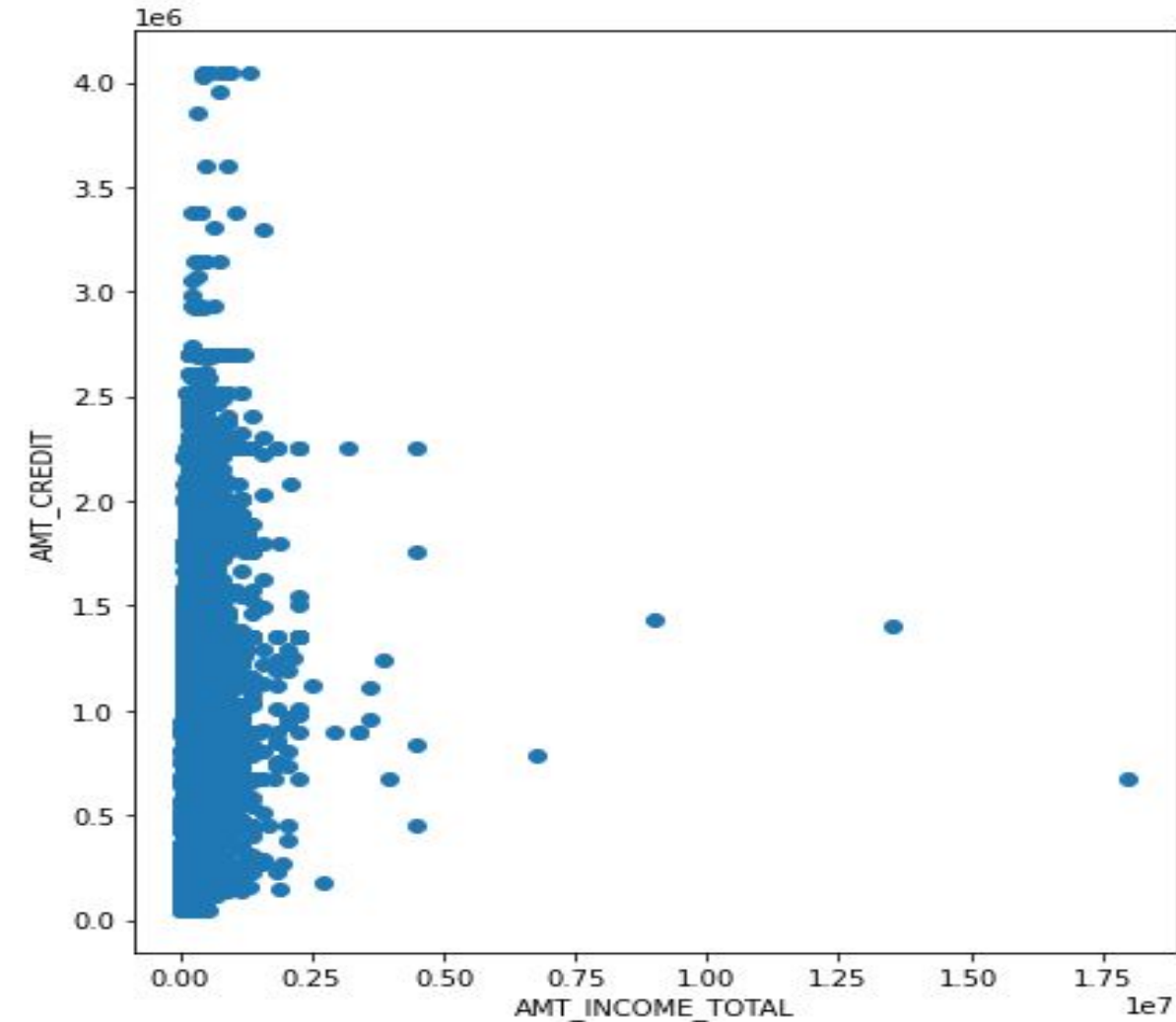


### Comparison of Credit Amount and Annuity Amount

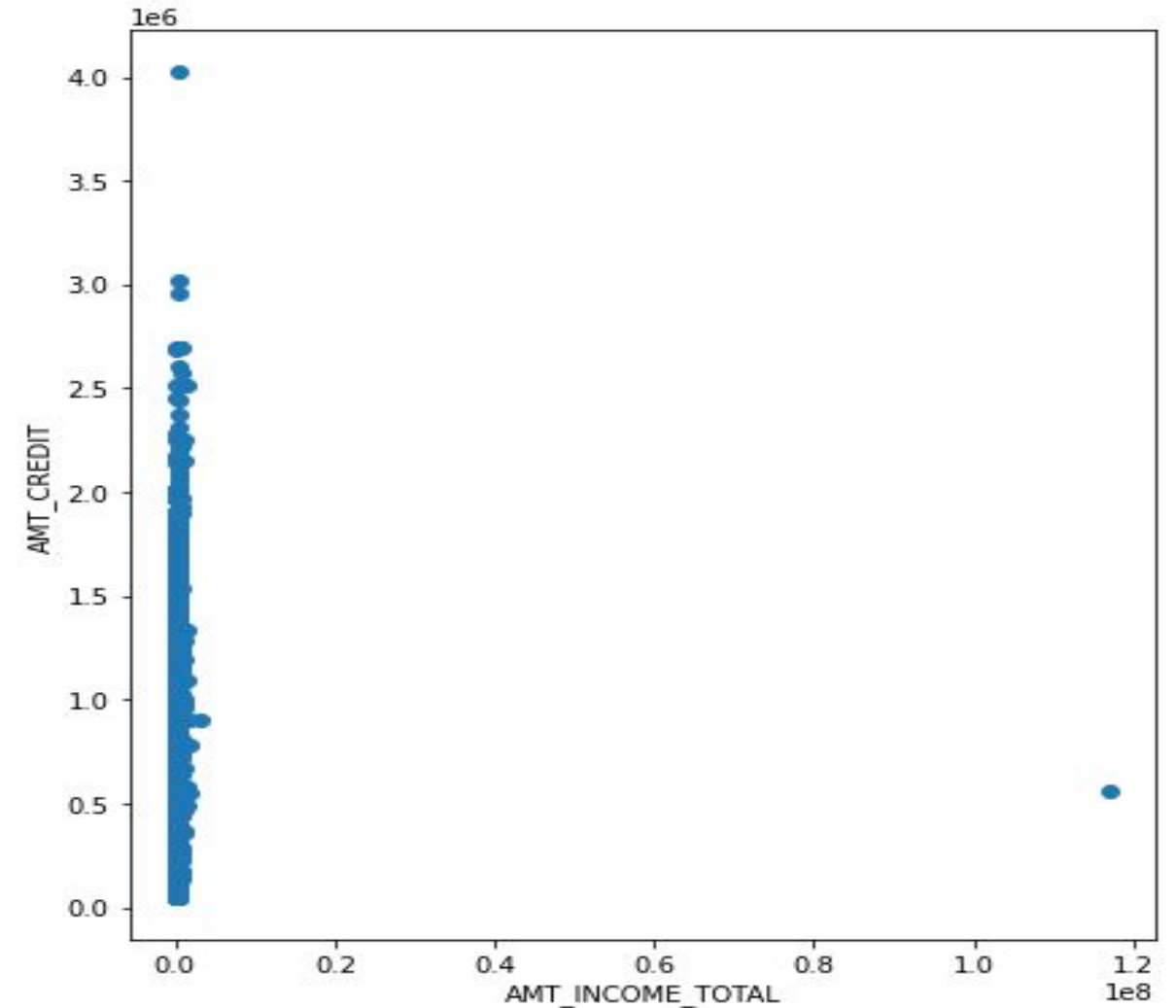
- Defaulters are having higher density towards lower credit amount and lower annuity amount.



Comparison of Total Income and Credit Amount for NON-DEFAULTERS



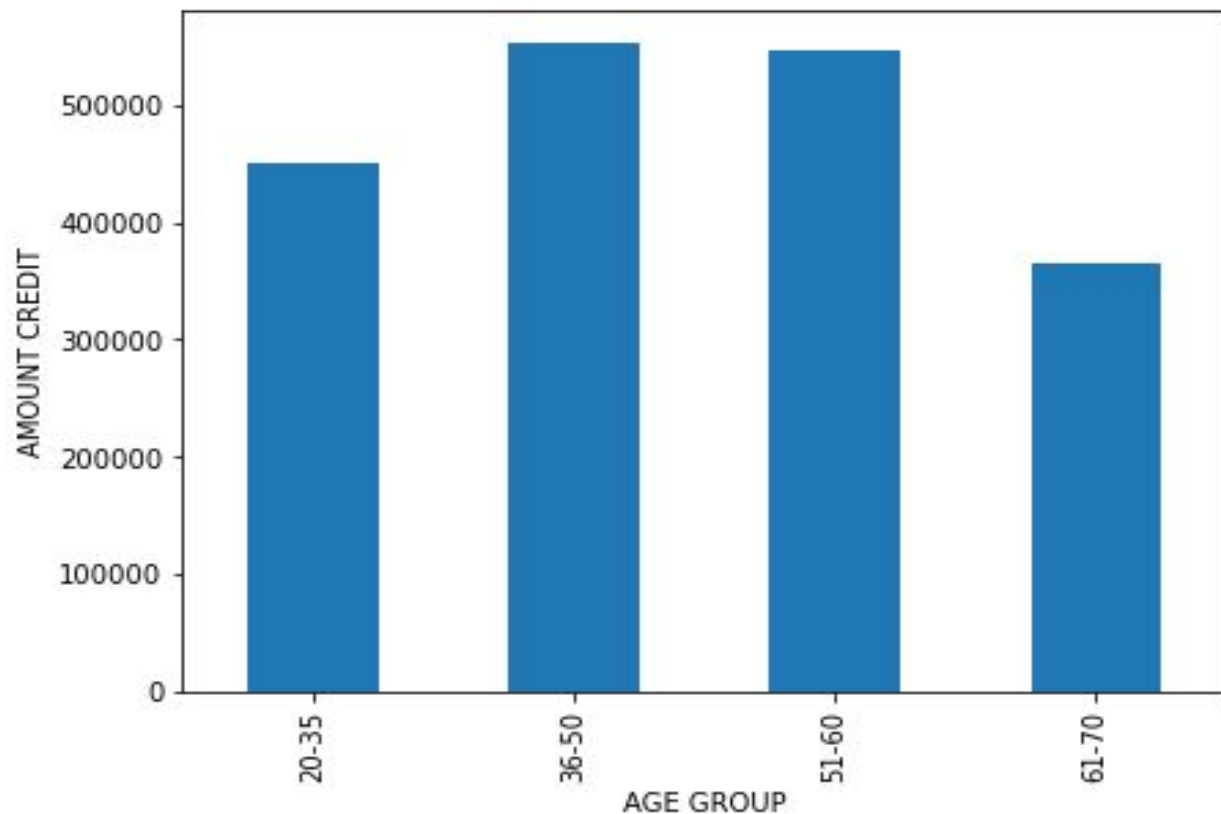
Comparison of Total Income and Credit Amount for DEFAULTERS



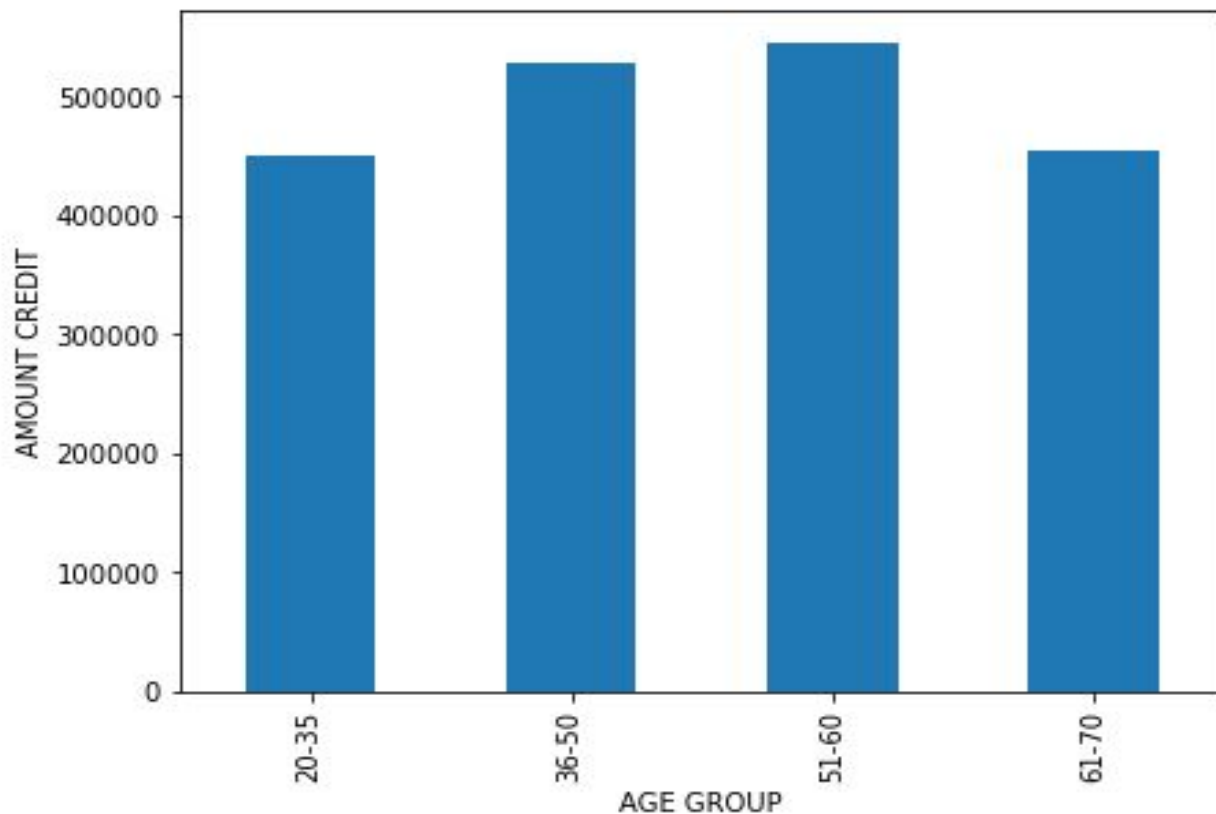
## Comparison of Total Income and Credit Amount

- Defaulters are less if credit amount is greater than 2.8 lakh.
- Majority of defaulters have low income.

Comparison of Credit Amount with Age Group for non-defaulters



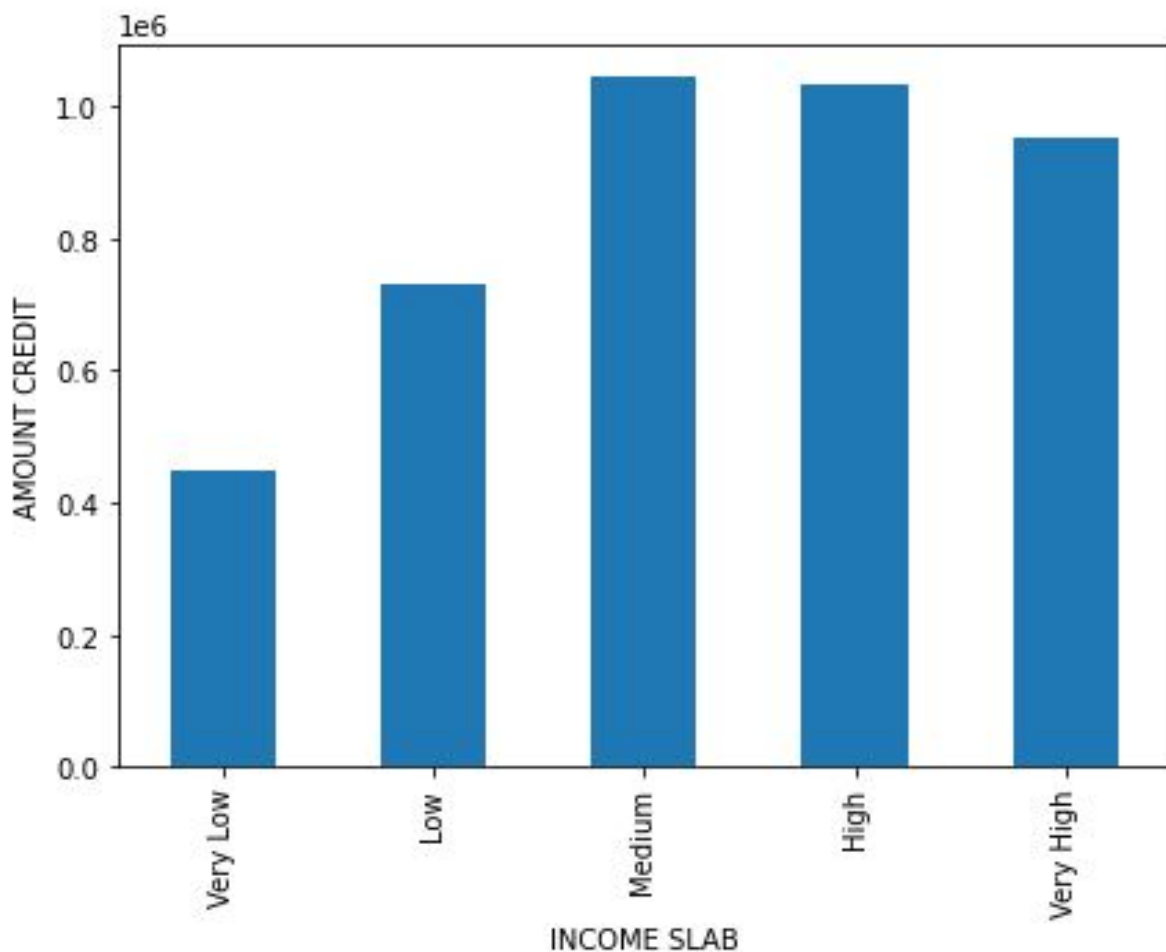
Comparison of Credit Amount with Age Group for defaulters



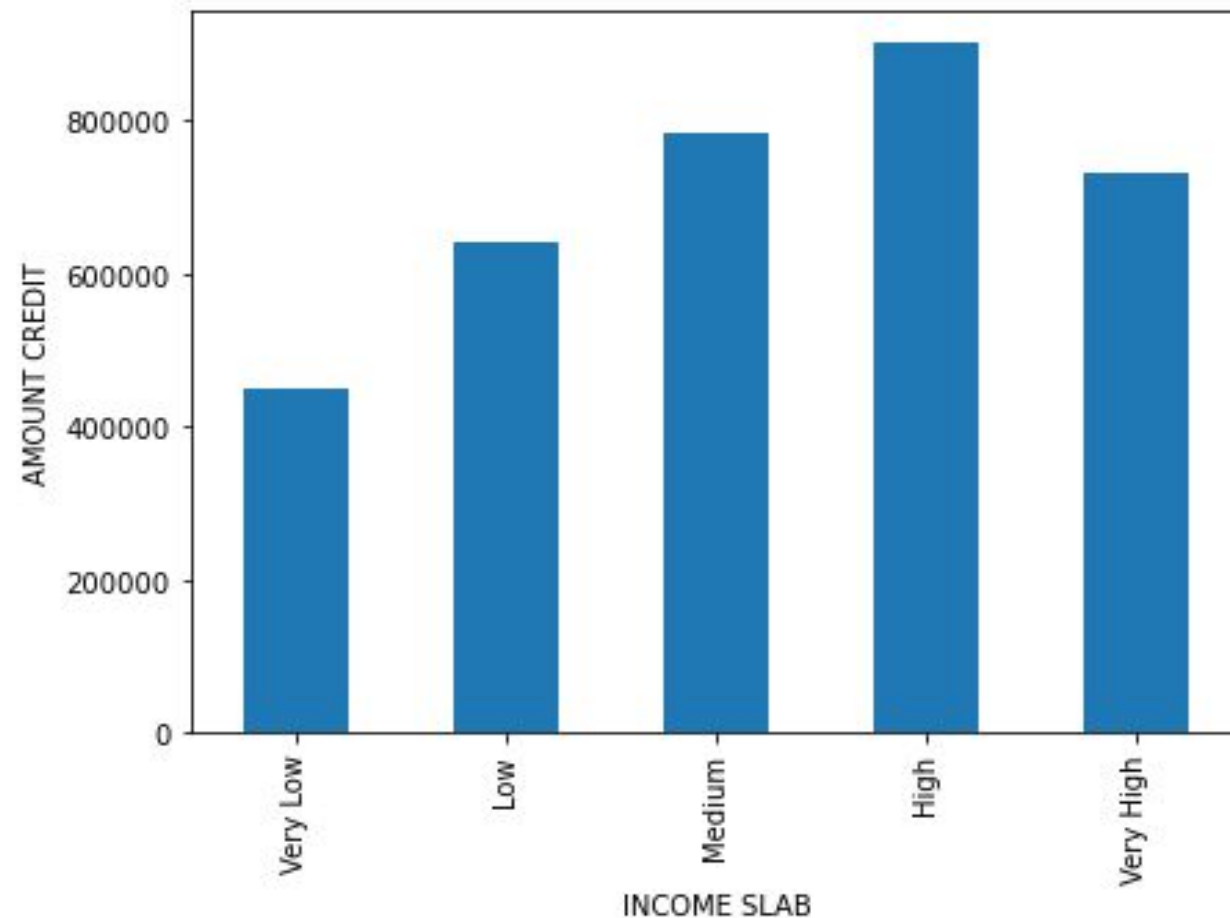
### Comparison of Credit Amount and Age Group

- People in age group 61-70 having higher credit amounts are likely to fall in defaulters list.
- People in the age groups 36-60 are opting for the higher credit amounts, probably because of family requirements.

Comparison of Credit Amount with Income Slab for non-defaulters

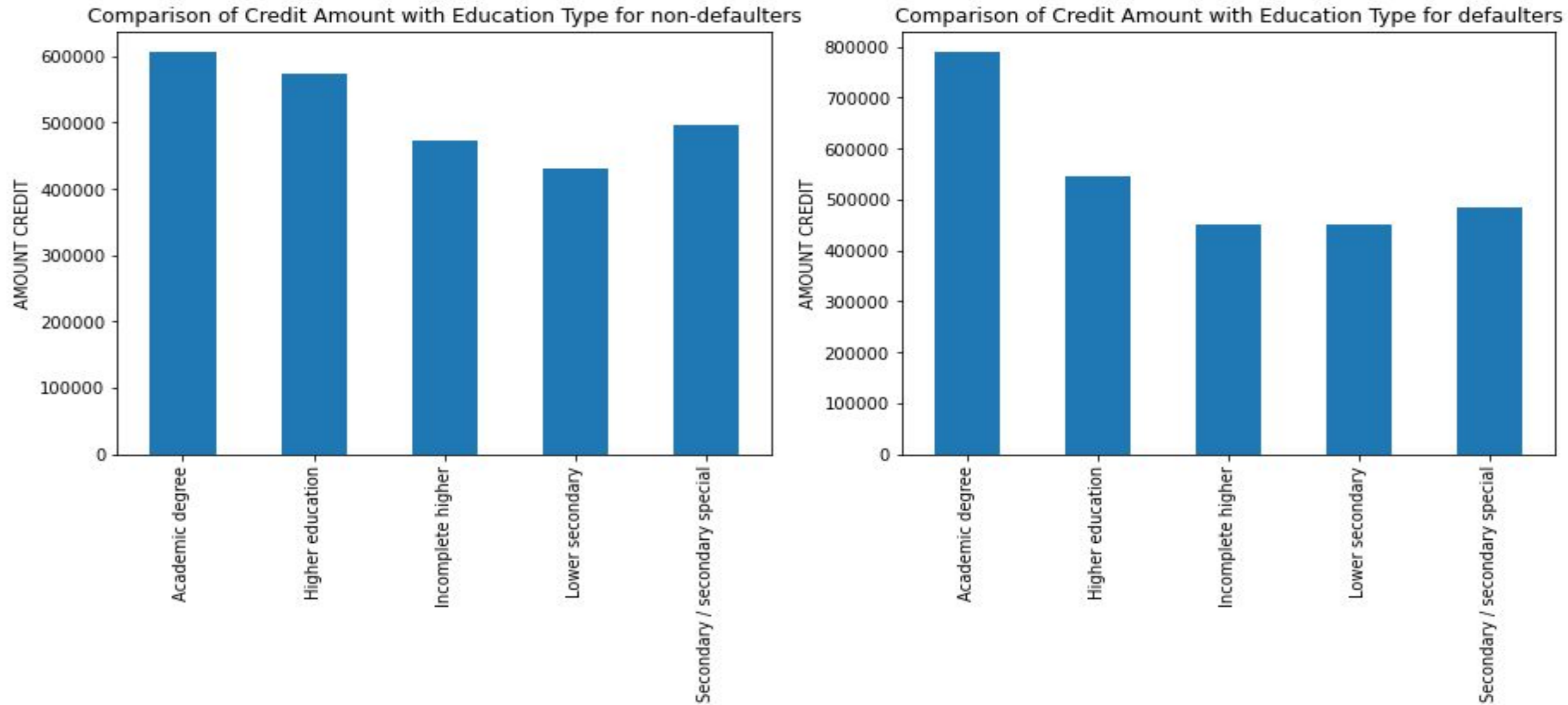


Comparison of Credit Amount with Income Slab for defaulters



### Comparison of Credit Amount and Income Slab

- We have to keep a tap on the people with high income and taking higher credit amount as the number of cases of default are higher.
- Low, Medium and Very high income slab groups have less cases in default compared to non-defaults.



**Comparison of Credit Amount and Education**

- People having academic degree and higher credit amount are having higher probability of being defaulter.

# Conclusion

- **Income:** Income is the most important factor for analysing applications. People having low income have higher chances of defaults.
- **Income Type:** Working professionals are having higher probability of being defaulters while Pensioners, Commercial associate, State Servants have much lower chances of defaults.
- **Family Status:** NBFC should be careful giving loans to single / not-married as well as to people with civil marriages.
- **Age Groups:** People in age group 20-35 are having higher probability of being defaulter while category 51-60 appear to have less chances of default.
- **Education:** People with Higher Education are having less probability of getting in defaulters list while people with secondary education have much higher chances. Also, people having academic degree and higher credit amount are having higher probability of being defaulter.
- **Credit Amount:** Defaulters are less if credit amount is greater than 2.8 lakh. We have to keep a tap on the people falling in the medium and low credit slabs. Also, very high credit slab people have the less chances of being defaulters and same is applicable to high credit slab people while people lying in medium slab of credit amount and in low slab of credit amount are at higher risk of being defaulter. In addition to that people in age groups 61-70 having higher credit amounts are likely to fall in defaulters list.
- **Count of Family Members:** Number of family members being 2 appear to be the best category as there are less chances of default.
- **Accommodation Type:** People living on rent or living with parents have higher percentage in Defaulters list as compared to others.

# THANK YOU :)

By: -

Utkarsh Wadhwa (7503609051)

Srijan Mehta (9719944782)

Email: -

utkarshwadhwa25@gmail.com

srijanmehta12@gmail.com