



For credits analytics intern

# PROJECT SUBMISSION

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# STAGES FOR ANALYSIS

The project aims to identifies the relationship between different KPIs to derive insights .

01

## SETTING UP THE SYSTEM

- Loading libraries into system.
- Exporting datasets into Jupyter Notebook environment.

02

## PREPROCESSING DATASET

- Ensuring data integrity,data redundancy and data consistency.

03

## EXPLORATORY DATA ANALYSIS

- Identifying KPIs
- Identifying duplicates
- Performing EDA

# DESIGNING APPROACH

Upon looking at the dataset during EDA processes I came across following findings:

- There are some users that have multiple entries with different consecutive USER\_LOAN\_RANK .For example: Users with multiple loans sanctioned. Duplicates with highest ranks are taken (Fig1)
- Creation of new column “tenure of loan” from calculating the days between day of loan disbursed (DISBURSED\_AT) and day of loan repayment (PAID\_IN\_FULL\_AT) this exclude defaulted loans. (Fig1)
- Descriptive and inferential statistics are used here to summarize the data distribution among the data set provided.
- Segmenting the data set into two segment:
  - Seg1 : Users who used this service at least once. (Rank=1)
  - Seg2 : Users who used the service more than once. (Rank>1)
- Understanding the context of the dataset via asking questions and trying to find relationship between the KPIs.

ID	LOAN_ID	USER_ID	DISBURSED_AT	USER_LOAN_RANK	PAID_IN_FULL_AT	tenure of loan
2	5774993	3057207	15-05-2018	2	12-06-2018	28
23730	5146936	3057207	15-04-2018	1	13-05-2018	28



# **EXPLORATIONS DURING EDA**

- Business model is to provide loans with a loan payment to be paid in a structure(LOAN\_TERM\_days) of multiple of 28 days payment window.
- There is a range of AMOUNT\_DISBURSED that defines the 28 days multiple.Fig2.
- The LOAN\_TERM\_days can be paid in installments either in a 7 day payout or 28 day payout(NUM\_REPYAMENTS).

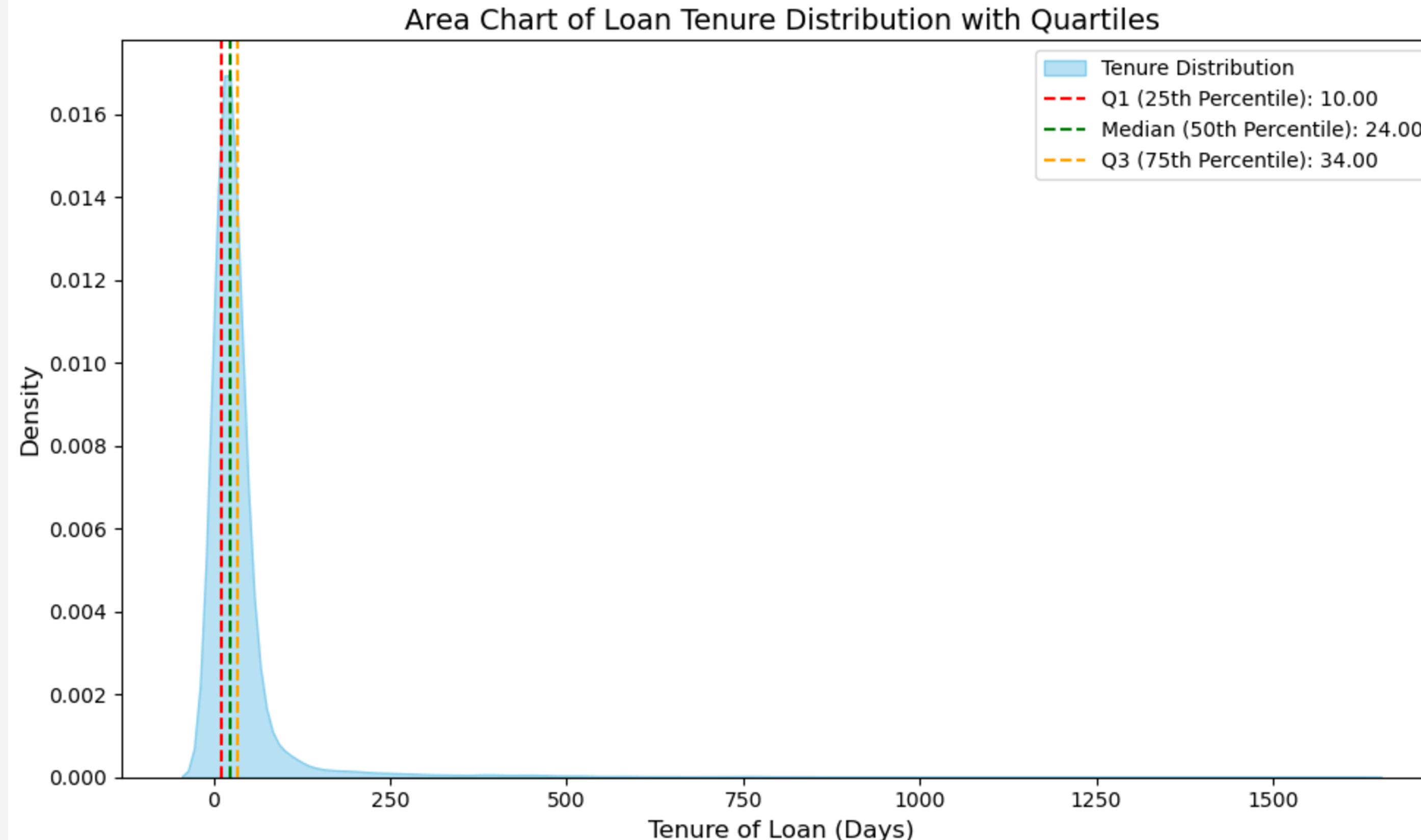
<b>Range of amount disbursed</b>	<b>Days</b>
250(MIN)-5000	28
5000-20000	56
20000-23000	84
23000-25000	112
25000 -60000(Max)	140 - 420(max)

## FEW QUESTIONS TO BE ASKED

Questions	Segment 1	Segment 2
1.What are the number of entries for the segment?	15684	56365
2How many loans are defaulted by user in each segment?	22.73% (3566 among 15684)	13.4% 7569 among 56365
3.How many one time users paid the loan on time ?	70.97% (Excluding defaults)	72.94% (Excluding defaults)
4.How many customers paid on the same day of having the loan issued?	574	833

# LOAN TENURE TRENDS

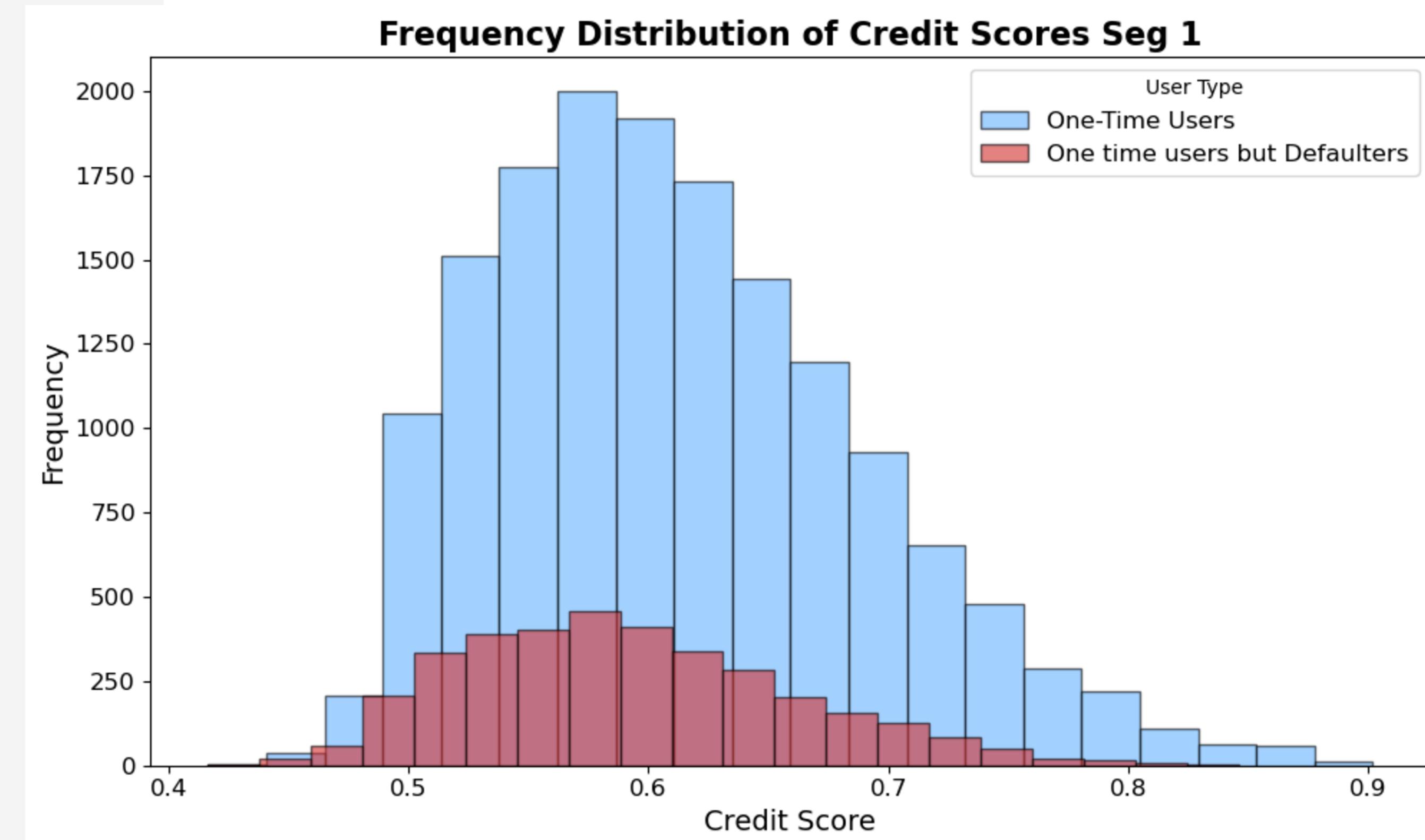
- 1. The dataset excludes duplicate values.
- 2. Most loans have short tenures (10-34 days).
- 3. Highly right-skewed distribution suggests customers strongly prefer shorter-term loans.
- 4. Consider incentives for longer tenures if beneficial for business



# CREDIT SCORE TRENDS

## INSIGHTS FROM SEG1

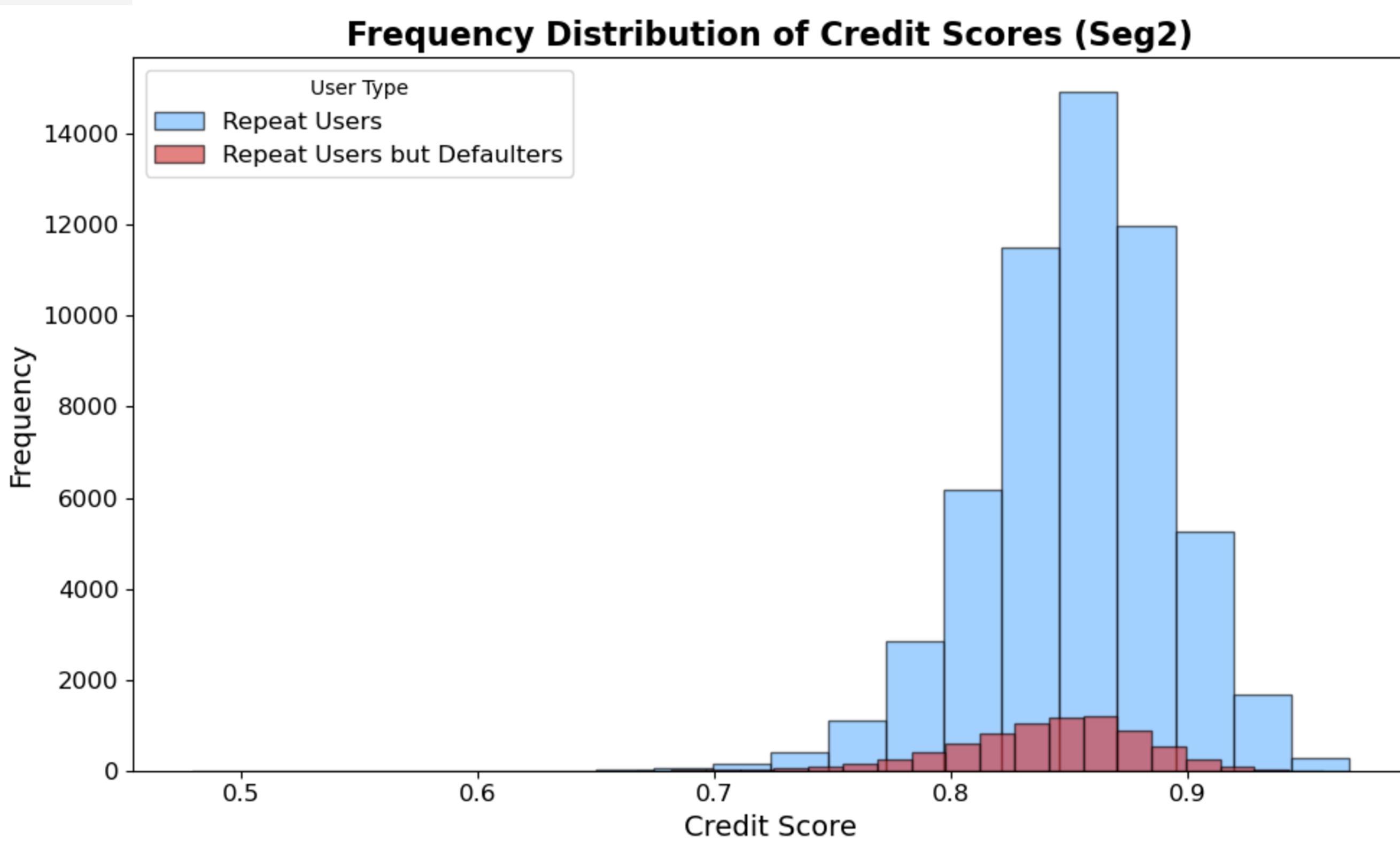
1. Non-defaulters (blue) have higher credit scores, centered around 0.6-0.7 with mean score of 0.61.
2. Defaulters (red) show lower credit scores, concentrated around 0.55-0.65 with mean score of 0.590973.
3. Implement stricter verification for scores below 0.65
4. Here , all the defaulters have 28 day loan term structure.



# CREDIT SCORE TRENDS

## INSIGHTS FROM SEG2

1. Repeat users have significantly higher credit scores (0.8-0.9) with mean score of 0.852970.
2. Defaulters among repeat users also show higher scores (0.8-0.85) with mean score of 0.841597
3. 86.6% successful repayment rate
4. Credit scores above 0.8 indicate reliable repeat customer
5. Here , 11.5% of defaulters have 28 day loan term structure.



# LOAN RANK BY LOAN TERM ANALYSIS

- 1. 28-day loans show highest defaults across all rank
- 2. Lower ranks (2-4) show higher default rates
- 3. Rank 2 has most defaults, particularly in 28-day loans
- 4. Higher ranks (6+) demonstrate better repayment behavior
- 5. Consider promoting 56-day terms for better repayment rates

