

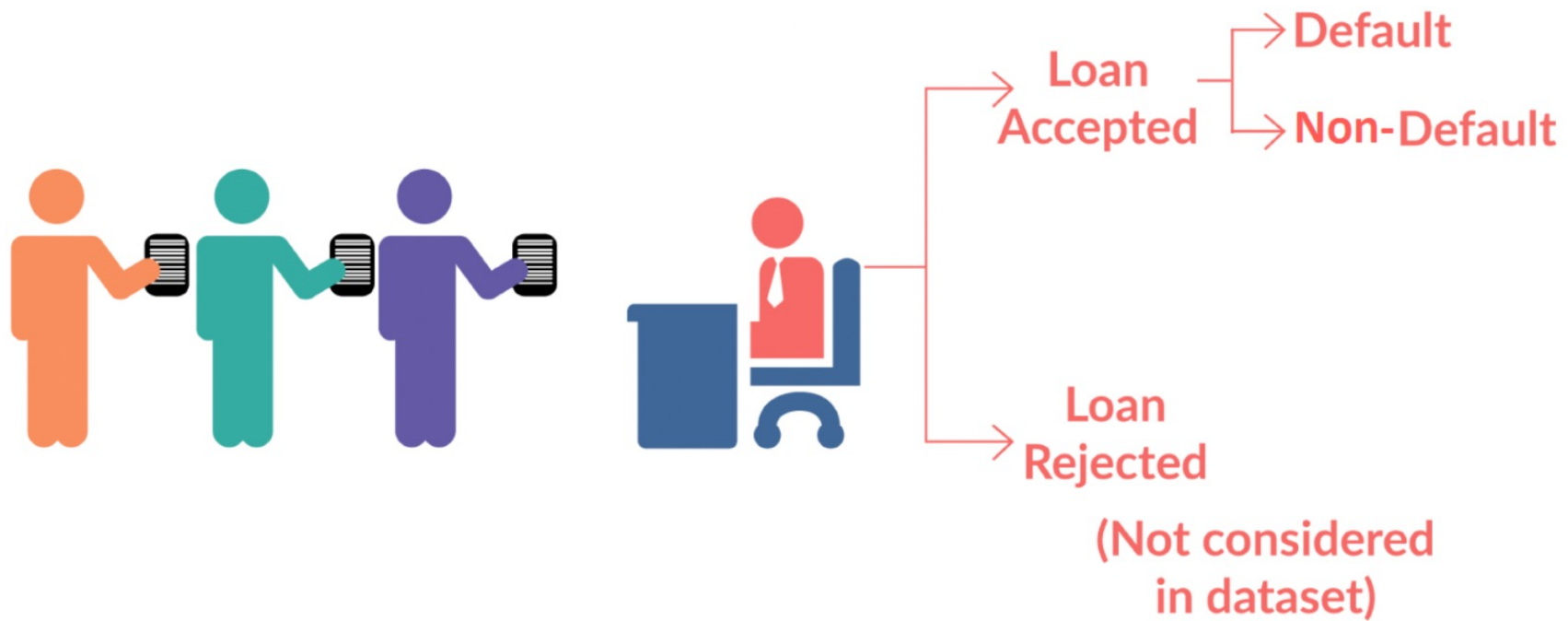
The background of the slide is a light gray gradient. It is decorated with numerous realistic water droplets of various sizes. Some droplets are large and prominent, while others are small and subtle. They are scattered across the slide, with a higher concentration in the top-left and bottom-right corners. Each droplet has a soft highlight and a subtle shadow, giving it a three-dimensional appearance.

# **LENDING CLUB CASE STUDY**

# PROBLEM STATEMENT


- YOU WORK FOR A **CONSUMER FINANCE COMPANY** WHICH SPECIALISES IN LENDING VARIOUS TYPES OF LOANS TO URBAN CUSTOMERS. WHEN THE COMPANY RECEIVES A LOAN APPLICATION, THE COMPANY HAS TO MAKE A DECISION FOR LOAN APPROVAL BASED ON THE APPLICANT'S PROFILE. TWO **TYPES OF RISKS** ARE ASSOCIATED WITH THE BANK'S DECISION:
- IF THE APPLICANT IS **LIKELY TO REPAY THE LOAN**, THEN NOT APPROVING THE LOAN RESULTS IN A **LOSS OF BUSINESS** TO THE COMPANY
- IF THE APPLICANT IS **NOT LIKELY TO REPAY THE LOAN**, I.E. HE/SHE IS LIKELY TO DEFAULT, THEN APPROVING THE LOAN MAY LEAD TO A **FINANCIAL LOSS** FOR THE COMPANY
- THE DATA GIVEN BELOW CONTAINS INFORMATION ABOUT PAST LOAN APPLICANTS AND WHETHER THEY 'DEFAULTED' OR NOT. THE AIM IS TO IDENTIFY PATTERNS WHICH INDICATE IF A PERSON IS LIKELY TO DEFAULT, WHICH MAY BE USED FOR TAKING ACTIONS SUCH AS DENYING THE LOAN, REDUCING THE AMOUNT OF LOAN, LENDING (TO RISKY APPLICANTS) AT A HIGHER INTEREST RATE, ETC.
- IN THIS CASE STUDY, USE EDA TO UNDERSTAND HOW **CONSUMER ATTRIBUTES** AND **LOAN ATTRIBUTES** INFLUENCE THE TENDENCY OF DEFAULT.

# LOAN DATASET





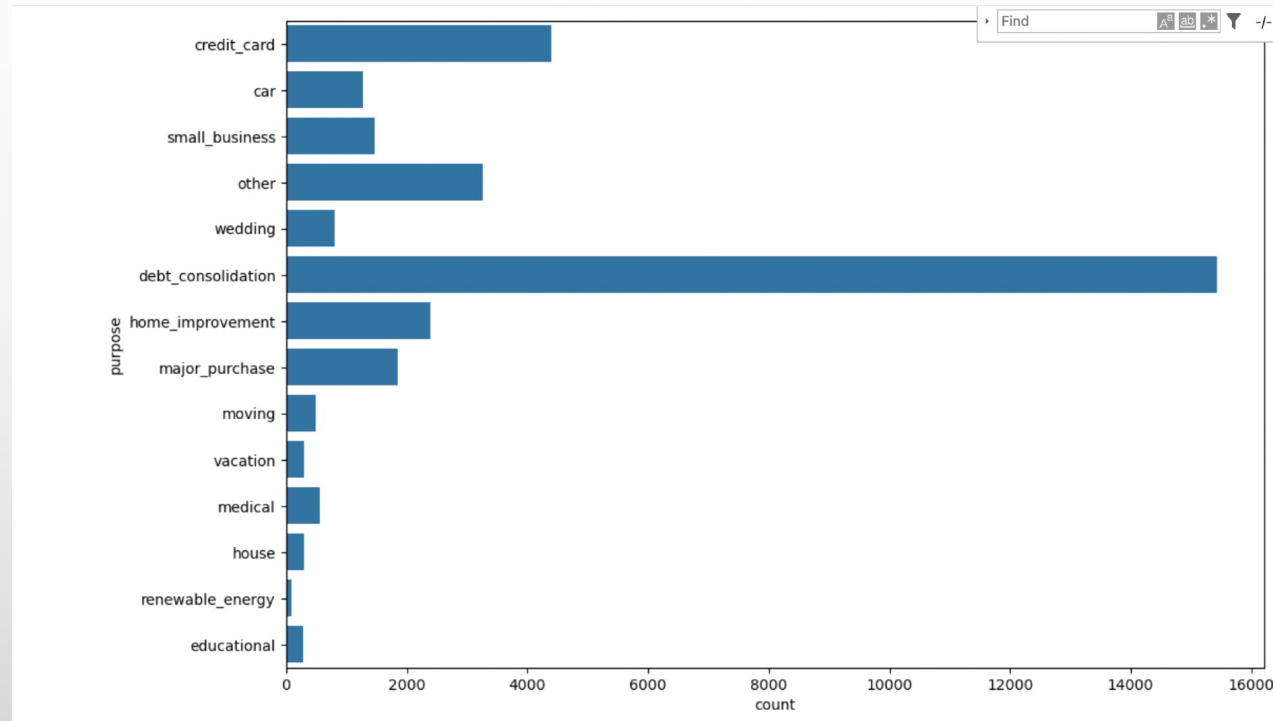
# APPROACH

- DATA ANALYSIS
  - DATA CLEANING
  - UNIVARIATE ANALYSIS
  - BIVARIATE ANALYSIS
  - BUSINESS CONCLUSION
- 

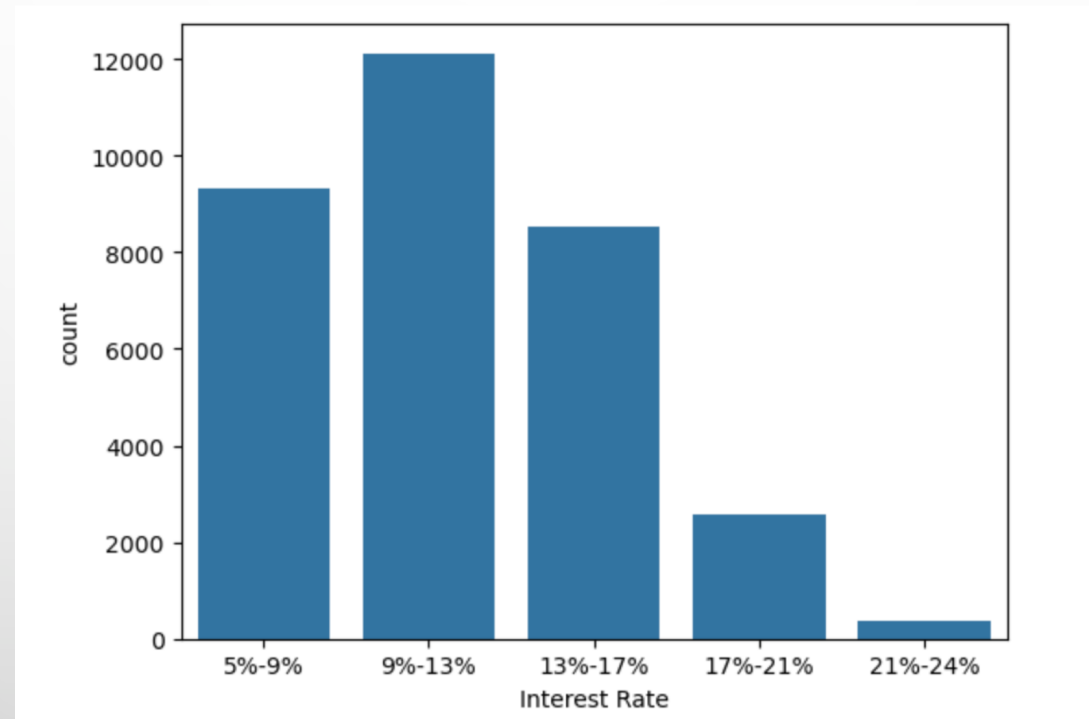
# UNIVARIATE, BIVARIATE ANALYSIS IN TERMS OF BUSINESS

1. FULLY PAID LOANS ARE MORE THAN CHARGED OFF LOANS.
2. THE MOST OF THE LOANS CHARGED OFF WERE TAKEN FOR THE PURPOSE OF DEBT\_CONSOLIDATION.
3. MOST OF THE LOANS DEFAULTED WERE WITH INTEREST RATE IN THE RANGE 9-13
4. APPLICANTS WHO HAVE APPLIED FOR LARGER LOAN AMOUNTS HAVE TAKEN LONG TERM LOANS
5. CHARGED OFF IS MORE IN CASE OF MORTGAGE

THE MOST OF THE LOANS CHARGED OFF WERE TAKEN FOR THE PURPOSE OF DEBT\_CONSOLIDATION.



# MOST OF THE LOANS DEFAULTED WERE WITH INTEREST RATE IN THE RANGE 9-13



# THE MORE THE LOAN AMOUNT THE MORE ARE THE CHANCES OF DEFAULT

