**Exploratory Data**

**DIFFERENT VARIBLE**

**Loan ID:**

Purpose: Loan ID is a unique identifier assigned to each loan application or loan account. It serves as a primary key for tracking and managing individual loans.

Use for Banks: Banks use Loan IDs to efficiently manage and track loans throughout their lifecycle. It aids in organizing loan records, monitoring repayments, and addressing customer inquiries.

**Address State:**

Purpose: Address State indicates the borrower's location. It helps in assessing regional risk factors, compliance with state regulations, and estimating default probabilities.

Use for Banks: Banks use this information to identify regional trends in loan demand, adjust marketing strategies, and manage risk portfolios based on geographic regions.

**Employee Length:**

Purpose: Employee Length provides insights into the borrower's employment stability. Longer employment durations may indicate greater job security.

Use for Banks: Banks consider employment length when assessing a borrower's ability to repay. Stable employment often translates to a lower default risk.

**Employee Title:**

Purpose: Employee Title specifies the borrower's occupation or job title. It helps lenders understand the source of the borrower's income.

Use for Banks: Banks use this field to verify income sources, assess the borrower's financial capacity, and tailor loan offers to different professions.

**Grade:**

Purpose: Grade represents a risk classification assigned to the loan based on creditworthiness. Higher grades signify lower risk.

Use for Banks: Banks use the grade to price loans and manage risk. Higher-grade loans typically receive lower interest rates and are more attractive to investors.

**Sub Grade:**

Purpose: Sub Grade refines the risk assessment within a grade, providing additional risk differentiation.

Use for Banks: Sub Grades offer a finer level of risk assessment, helping banks tailor interest rates and lending terms to match borrower risk profiles.

**Home Ownership:**

Purpose: Home Ownership indicates the borrower's housing status. It offers insights into financial stability.

Use for Banks: Banks use this field to assess collateral availability and borrower stability. Homeowners may have lower default rates.

**Issue Date:**

Purpose: Issue Date marks the loan's origination date. It's crucial for loan tracking and maturity calculations.

Use for Banks: Banks use Issue Dates to track loan aging, calculate interest accruals, and manage loan portfolios.

**Last Credit Pull Date:**

Purpose: Last Credit Pull Date records when the borrower's credit report was last accessed. It helps monitor creditworthiness.

Use for Banks: Banks use this date to track credit history updates, assess credit risk, and make informed lending decisions.

**Last Payment Date:**

Purpose: Last Payment Date marks the most recent loan payment received. It tracks the borrower's payment history.

Use for Banks: Banks use this date to assess payment behavior, calculate delinquency, and project future payments.

**Loan Status:**

Purpose: Loan Status indicates the current state of the loan (e.g., fully paid, current, default). It tracks loan performance.

Use for Banks: Banks use Loan Status to monitor loan health, categorize loans for risk analysis, and determine provisioning requirements.

**Next Payment Date:**

Purpose: Next Payment Date estimates the date of the next loan payment. It assists in cash flow forecasting.

Use for Banks: Banks use this date for liquidity planning and to project revenue from loan portfolios.

**Purpose:**

Purpose: Purpose specifies the reason for the loan (e.g., debt consolidation, education). It helps understand borrower intentions.

Use for Banks: Banks use this field to segment and customize loan offerings, aligning loan terms with borrower needs.

**Term:**

Purpose: Term defines the duration of the loan in months. It sets the repayment period.

Use for Banks: Banks use the term to structure loan agreements, calculate interest payments, and manage loan maturities.

**Verification Status:**

Purpose: Verification Status indicates whether the borrower's financial information has been verified. It assesses data accuracy.

Use for Banks: Banks use this field to gauge data reliability, verify income, and evaluate loan application credibility.

**Annual Income:**

Purpose: Annual Income reflects the borrower's total yearly earnings. It assesses repayment capacity.

Use for Banks: Banks use this income figure to determine loan eligibility, calculate debt-to-income ratios, and evaluate creditworthiness.

**DTI (Debt-to-Income Ratio):**

Purpose: DTI measures the borrower's debt burden relative to income. It gauges the borrower's capacity to take on additional debt.

Use for Banks: Banks use DTI to assess a borrower's ability to handle loan payments and make responsible lending decisions.

**Instalment:**

Purpose: Instalment is the fixed monthly payment amount for loan repayment, including principal and interest.

Use for Banks: Banks use this field to structure loan terms, calculate amortization schedules, and assess payment affordability.

**Interest Rate:**

Purpose: Interest Rate represents the annual cost of borrowing expressed as a percentage. It determines the loan's cost.

Use for Banks: Banks use interest rates to price loans, manage profit margins, and attract investors.

**Loan Amount:**

Purpose: Loan Amount is the total borrowed sum. It defines the principal amount.

Use for Banks: Banks use Loan Amount to determine loan size