

# Data Cleaning:

The screenshot shows the Power BI Desktop interface with the 'LoanDetails' table selected. The query bar displays the formula: `= Table.RenameColumns(#"capitalized Each Word",{{"last_pymnt_d", "last_pymnt_date"}})`. The table view shows columns: `member_id`, `loan_id`, `emp_length`, `home_ownership`, and `annual_inc`. The 'Query Settings' pane on the right shows the 'APPLIED STEPS' list, which includes 'Renamed Columns'. A context menu is open over the table, showing options for 'English (India)' and 'English (India)'.

|    | member_id | loan_id | emp_length | home_ownership | annual_inc |
|----|-----------|---------|------------|----------------|------------|
| 1  | 1296599   | 1077501 | 10+ years  | Rent           | 24         |
| 2  | 1314167   | 1077430 | < 1 year   | Rent           | 30         |
| 3  | 1313524   | 1077175 | 10+ years  | Rent           | 12         |
| 4  | 1277178   | 1076863 | 10+ years  | Rent           | 49         |
| 5  | 1311748   | 1075358 | 1 year     | Rent           | 80         |
| 6  | 1311441   | 1075269 | 3 years    | Rent           | 36         |
| 7  | 1304742   | 1069639 | 8 years    | Rent           | 47         |
| 8  | 1288686   | 1072053 | 9 years    | Rent           | 48         |
| 9  | 1306957   | 1071795 | 4 years    | Own            | 40         |
| 10 | 1306721   | 1071570 | < 1 year   | Rent           | 15         |
| 11 | 1305201   | 1070078 | 5 years    | Own            | 72         |
| 12 | 1305008   | 1069908 | 10+ years  | Own            | 75         |
| 13 | 1298717   | 1064687 | < 1 year   | Rent           | 30         |
| 14 | 1304956   | 1069866 | 3 years    | Rent           | 15         |
| 15 | 1303503   | 1069057 | 3 years    | Rent           | 100        |
| 16 | 1304871   | 1069759 | < 1 year   | Rent           | 28         |
| 17 | 1299699   | 1065775 | 4 years    | Rent           | 42         |
| 18 | 1304884   | 1069971 | 10+ years  | Mortgage       | 110        |
| 19 | 1294539   | 1062474 | 1 year     | Mortgage       |            |
| 20 | 1304855   | 1069742 | 6 years    | Rent           |            |

The screenshot shows the Power BI Desktop interface with the 'LoanDetails' table selected. The query bar displays the formula: `= Table.RemoveColumns(issue_date,{"sub_grade"})`. The table view shows columns: `id`, `loan_amnt`, `funded_amnt`, `term`, and `int_rate`. The 'Query Settings' pane on the right shows the 'APPLIED STEPS' list, which includes 'Removed Columns'. A context menu is open over the table, showing options for 'SHYAM' and 'Internet access'.

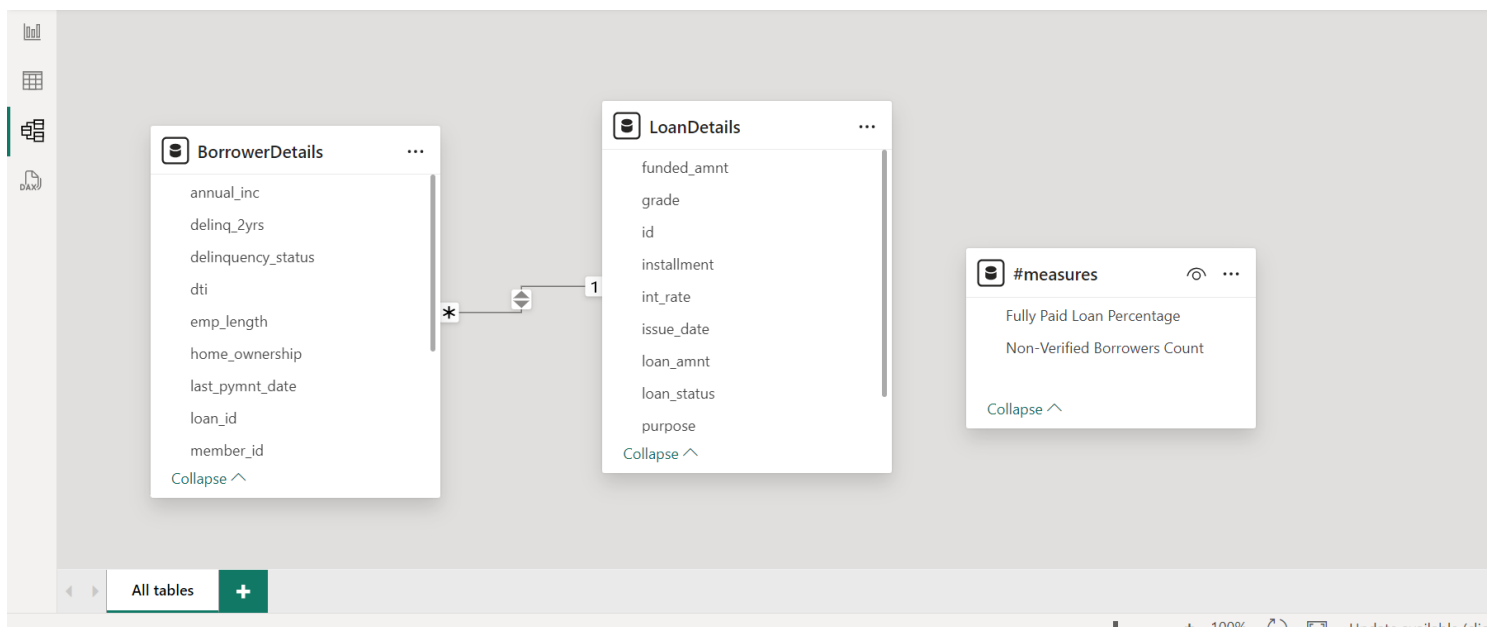
|    | id      | loan_amnt | funded_amnt | term      | int_rate |
|----|---------|-----------|-------------|-----------|----------|
| 1  | 1077501 | 5000      | 4975        | 36 months | 10       |
| 2  | 1077430 | 2500      | 2500        | 60 months | 15       |
| 3  | 1077175 | 2400      | 2400        | 36 months | 15       |
| 4  | 1076863 | 10000     | 10000       | 36 months | 13       |
| 5  | 1075358 | 3000      | 3000        | 60 months | 12       |
| 6  | 1075269 | 5000      | 5000        | 36 months | 12       |
| 7  | 1069639 | 7000      | 7000        | 60 months | 15       |
| 8  | 1072053 | 3000      | 3000        | 36 months | 16       |
| 9  | 1071795 | 5600      | 5600        | 60 months | 21       |
| 10 | 1071570 | 5375      | 5350        | 60 months | 12       |
| 11 | 1070078 | 6500      | 6500        | 60 months | 14       |
| 12 | 1069908 | 12000     | 12000       | 36 months | 12       |
| 13 | 1064687 | 9000      | 9000        | 36 months | 13       |
| 14 | 1069866 | 3000      | 3000        | 36 months | 5        |
| 15 | 1069057 | 10000     | 10000       | 36 months | 10       |
| 16 | 1069759 | 1000      | 1000        | 36 months | 16       |
| 17 | 1065775 | 10000     | 10000       | 36 months | 15       |
| 18 | 1069971 | 3600      | 3600        | 36 months | 6        |
| 19 | 1062474 | 6000      | 6000        | 36 months | 11       |
| 20 | 1069742 | 9200      | 9200        | 36 months | 6        |

## Data Transformation:

### Creating New Columns:

1. `total_amount_paid = BorrowerDetails[total_pymnt] - BorrowerDetails[out_prncp]`
2. `delinquency_status = if(BorrowerDetails[delinq_2yrs]>0,"Delinquent","Not Delinquent")`

## Data Modeling:



## Creating Measures and Calculated Columns using DAX:

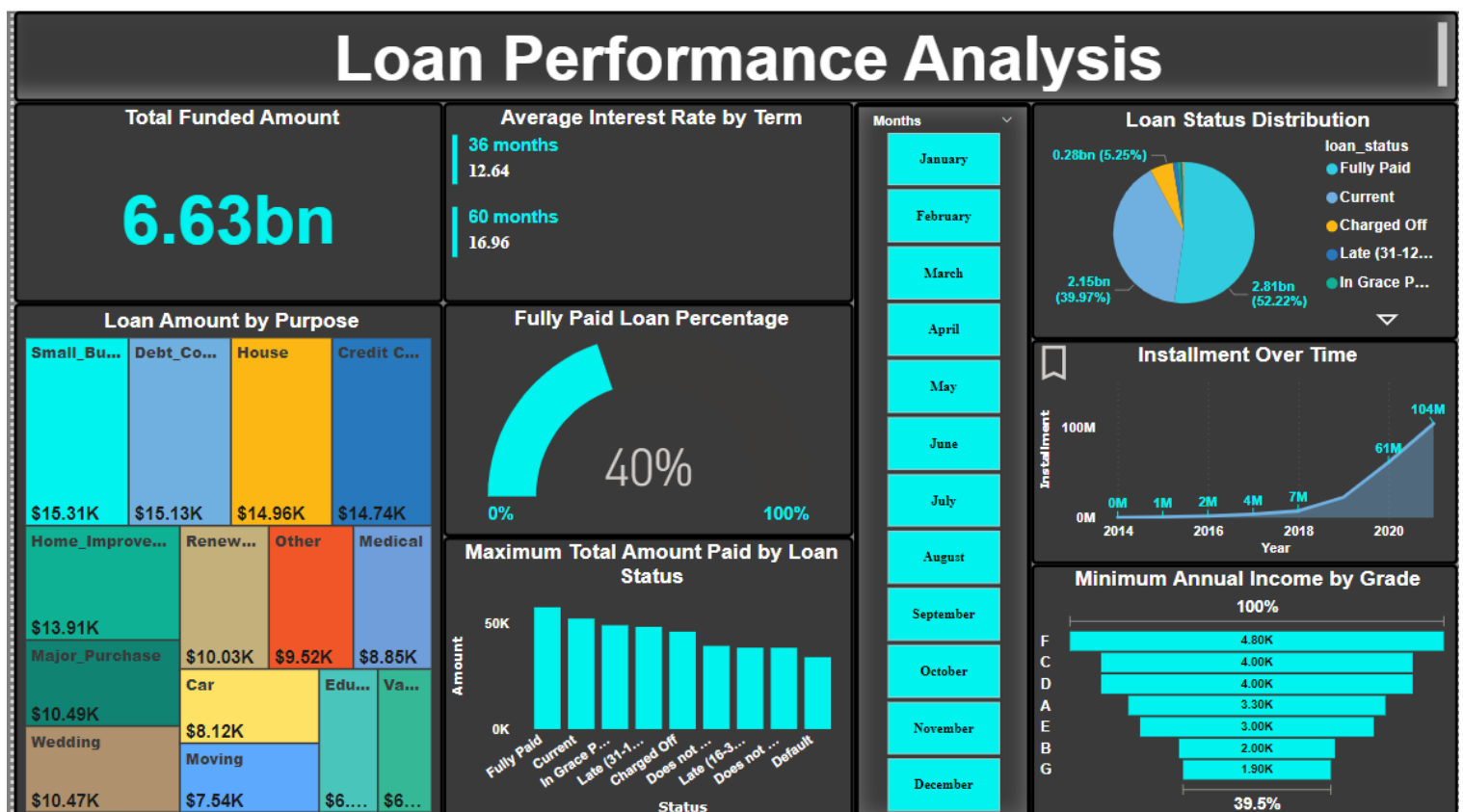
1. `remaining_installments = CEILING((BorrowerDetails[out_prncp] / RELATED(LoanDetails[installment])),1)`
2. `Non-Verified Borrowers Count = COUNTROWS(FILTER(BorrowerDetails,BorrowerDetails[verification_status]="Not Verified"))`

3. Fully Paid Loan Percentage =

$\text{DIVIDE}(\text{COUNTROWS}(\text{FILTER}(\text{LoanDetails}, \text{LoanDetails}[\text{loan\_status}] = \text{"Fully Paid"})), \text{COUNTROWS}(\text{LoanDetails}))$

## Creating Comprehensive Reports:

### Report 1: Loan Performance Analysis



### Report 2: Borrower Profile Analysis:

# Borrower Profile Analysis

## KPI Visual

**875.60M**  
Target: \$903.85M (-3.12%)

## Average of Annual income

**73.29K**

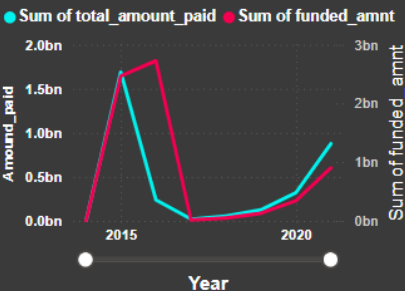
## purpose

All

## Sum of Loan Amount by Home Ownership

| home_ownership | Sum of loan_amnt |
|----------------|------------------|
| Any            | \$5,000          |
| None           | \$6,73,975       |
| Other          | \$19,67,450      |
| Own            | \$56,26,30,610   |
| Rent           | \$2,33,60,38,985 |
| Mortgage       | \$3,76,97,69,725 |
| Total          | \$6,67,44,56,000 |

## Total Amount Paid and Funded Amount Over Time



## Max Remaining Installments by Employment Length

| 6 years | 5 years  | 10+ ye... |       |
|---------|----------|-----------|-------|
| 132     | 88       | 76        |       |
| 3 years | < 1 year | 9 y...    | 0 ... |
| 58      | 42       |           |       |
| 4 years | 2 years  |           |       |
| 52      | 42       | 42        | 41    |
| 1 year  | 7 years  | 8 years   |       |
|         | 42       | 41        |       |

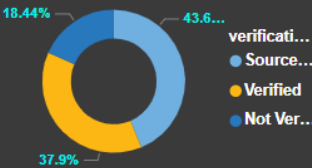
## Non-Verified Borrowers Count

**148K**

## Average Debt-to-Income by Delinquency Status

Delinquent  
17.16  
Average of dti

## Average Remaining Principal by Verification Status



## Sum of Delinquencies by Home Ownership

