

BANK LOAN ANALYSIS



**AUTOMATED EXCEL
DASHBOARD**



CONTENT

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graph TD; 1((1)) --- 2((2)) --- 3((3)); 1 --- 1L[IMPORT DATA (My SQL to Excel)]; 2 --- 2R[PROBLEM STATMENT]; 3 --- 3L[EXCEL DASHBOARD VIEW];
```

IMPORT DATA (My SQL to Excel)

1

2

PROBLEM STATMENT

3

EXCEL DASHBOARD VIEW

IMPORT DATA



Used ODBC 8.0.37 (windows 32bit) connector to import data in excel workbook from My SQL workbench

PROBLEM STATEMENT

Key Performance Indicators (KPIs) Requirements:

- 1. Total Loan Applications:** We need to calculate the total number of loan applications received during a specified period. Additionally, it is essential to monitor the Month-to-Date (MTD) Loan Applications and track changes Month-over-Month (MoM).
- 2. Total Funded Amount:** Understanding the total amount of funds disbursed as loans is crucial. We also want to keep an eye on the MTD Total Funded Amount and analyse the Month-over-Month (MoM) changes in this metric.
- 3. Total Amount Received:** Tracking the total amount received from borrowers is essential for assessing the bank's cash flow and loan repayment. We should analyse the Month-to-Date (MTD) Total Amount Received and observe the Month-over-Month (MoM) changes.
- 4. Average Interest Rate:** Calculating the average interest rate across all loans, MTD, and monitoring the Month-over-Month (MoM) variations in interest rates will provide insights into our lending portfolio's overall cost.
- 5. Average Debt-to-Income Ratio (DTI):** Evaluating the average DTI for our borrowers helps us gauge their financial health. We need to compute the average DTI for all loans, MTD, and track Month-over-Month (MoM) fluctuations.

PROBLEM STATEMENT

DASHBOARD 1: SUMMARY

Good Loan v Bad Loan KPI's

Good Loan:

- 1. Good Loan Application Percentage
- 2. Good Loan Applications
- 3. Good Loan Funded Amount
- 4. Good Loan Total Received Amount

Bad Loan

- 1. Bad Loan Application Percentage
- 2. Bad Loan Applications
- 3. Bad Loan Funded Amount
- 4. Bad Loan Total Received Amount

Loan Status Grid View

In order to gain a comprehensive overview of our lending operations and monitor the performance of loans, we aim to create a grid view report categorized by 'Loan Status.' By providing insights into metrics such as 'Total Loan Applications,' 'Total Funded Amount,' 'Total Amount Received,' 'Month-to-Date (MTD) Funded Amount,' 'MTD Amount Received,' 'Average Interest Rate,' and 'Average Debt-to-Income Ratio (DTI),' this grid view will empower us to make data-driven decisions and assess the health of our loan portfolio.

PROBLEM STATEMENT

DASHBOARD 2: OVERVIEW

CHARTS

1. **Monthly Trends by Issue Date (Line Chart):** To identify seasonality and long-term trends in lending activities
2. **Regional Analysis by State (Filled Map):** To identify regions with significant lending activity and assess regional disparities
3. **Loan Term Analysis (Donut Chart):** To allow the client to understand the distribution of loans across various term lengths.
4. **Employee Length Analysis (Bar Chart):** How lending metrics are distributed among borrowers with different employment lengths, helping us assess the impact of employment history on loan applications.
5. **Loan Purpose Breakdown (Bar Chart):** Will provide a visual breakdown of loan metrics based on the stated purposes of loans, aiding in the understanding of the primary reasons borrowers seek financing.
6. **Home Ownership Analysis (Tree Map):** For a hierarchical view of how home ownership impacts loan applications and disbursements.

Metrics to be shown: 'Total Loan Applications,' 'Total Funded Amount,' and 'Total Amount Received'

PROBLEM STATEMENT

DASHBOARD 3: DETAILS

GRID

Elaborated 'Details Dashboard' that provides a consolidated view of all the essential information within our loan data. This Details Dashboard aims to offer a holistic snapshot of key loan-related metrics and data points, enabling users to access critical information efficiently.

Objective:

The primary objective of the Details Dashboard is to provide a comprehensive and user-friendly interface for accessing vital loan data. It will serve as a one-stop solution for users seeking detailed insights into our loan portfolio, borrower profiles, and loan performance.

KEY INSIGHTS

DASHBOARD 3: DETAILS

GRID

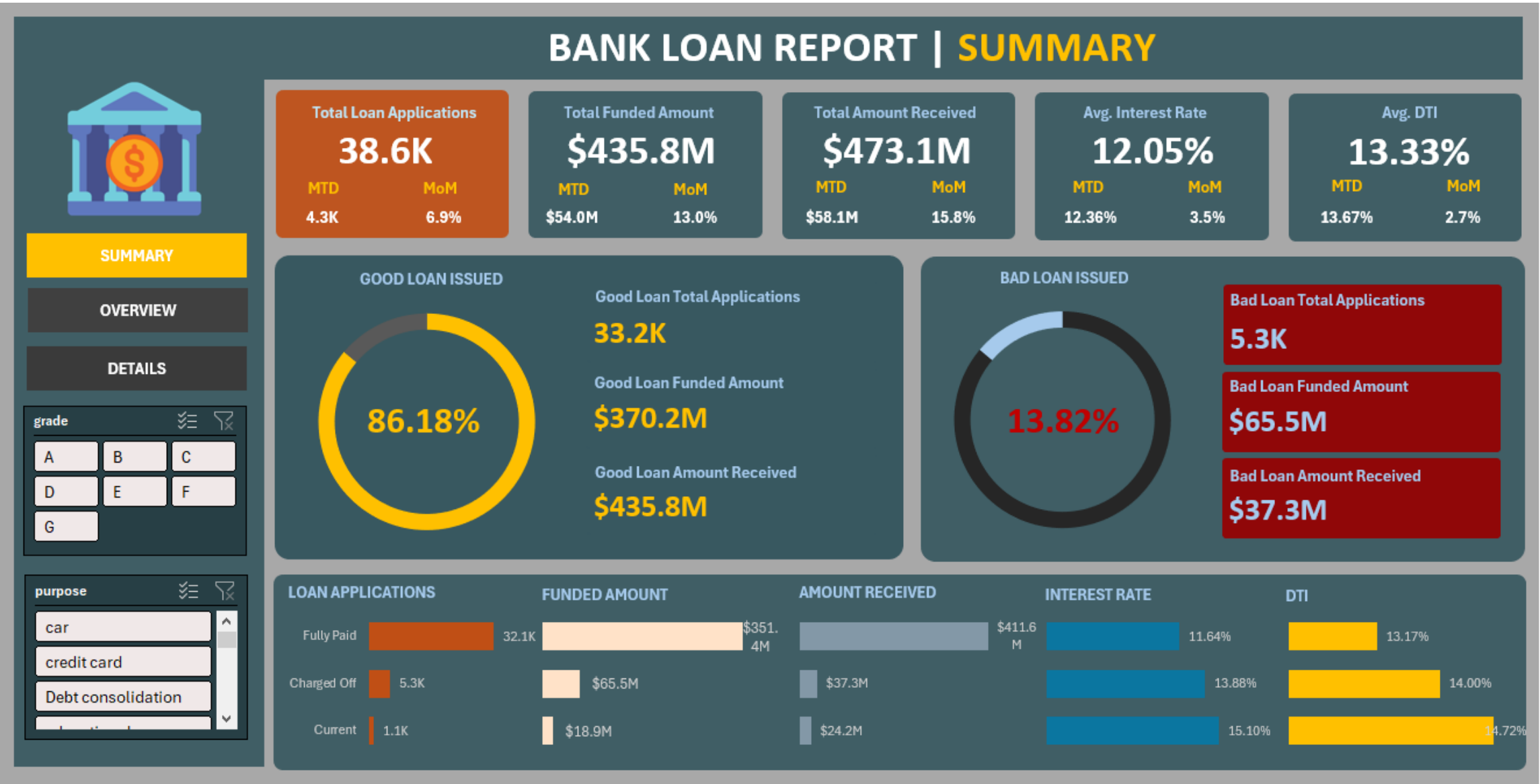
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EXCEL





EXCEL

BANK LOAN REPORT | OVERVIEW



SUMMARY

OVERVIEW

DETAILS

grade

A

B

C

D

E

F

G

purpose

car

credit card

Debt consolidation

Total Loan Applications

38.6K

MTD

4.3K

MoM

6.9%

Total Funded Amount

\$435.8M

MTD

\$54.0M

MoM

13.0%

Total Amount Received

\$473.1M

MTD

\$58.1M

MoM

15.8%

Avg. Interest Rate

12.05%

MTD

12.36%

MoM

3.5%

Avg. DTI

13.33%

MTD

13.67%

MoM

2.7%

Total Loan Applications by Month

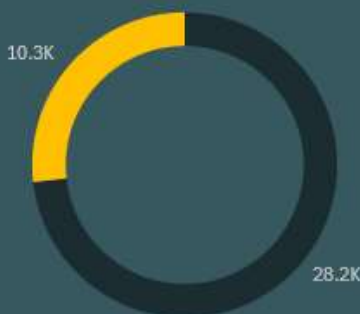


Total Loan Applications by State

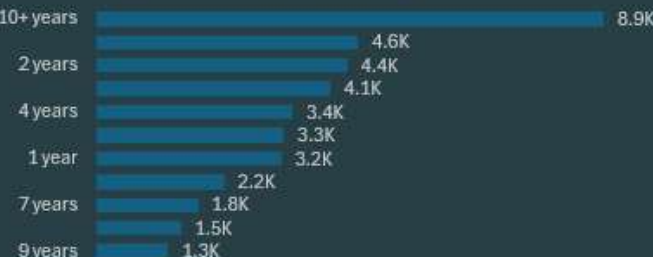


Total Loan Applications by Term

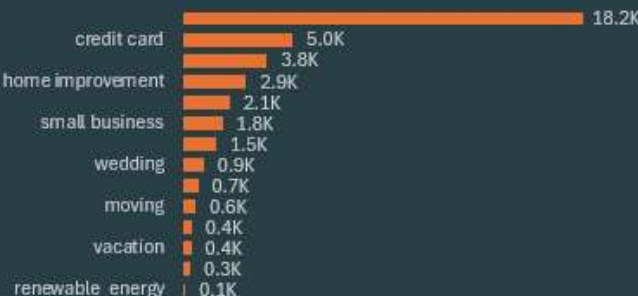
36 months 60 months



Total Loan Applications by Employee Length



Total Loan Applications by Purpose



Total Loan Applications by Home Ownerships





EXCEL

	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
1	emp_length	emp_title	grad	home_ow	issue_da	last_cred	last_payme	loan_status	Good vs Bad Lo	next_payme	member_i	purpo	sub	term	verification_sta	annual_in	dte	installm
2	< 1 year	Ryder	C	RENT	11/02/2021	13/09/2021	13/04/2021	Charged Off	Bad Loan	13/05/2021	1314167	car	C4	60 months	Source Verified	30000	0.01	59.83
3	9 years	MKG Accounting	E	RENT	01/01/2021	14/12/2021	15/01/2021	Fully Paid	Good Loan	15/02/2021	1288686	car	E1	36 months	Source Verified	48000	0.0535	109.43
4	4 years	Chemat Technology Inc	C	RENT	05/01/2021	12/12/2021	09/01/2021	Charged Off	Bad Loan	09/02/2021	1304116	car	C5	36 months	Not Verified	50000	0.2088	421.65
5	< 1 year	barnes distribution	B	MORTGAGE	25/02/2021	12/12/2021	12/03/2021	Fully Paid	Good Loan	12/04/2021	1272024	car	B2	60 months	Source Verified	42000	0.054	97.06
6	10+ years	J&J Steel Inc	A	MORTGAGE	01/01/2021	14/12/2021	15/01/2021	Fully Paid	Good Loan	15/02/2021	1302971	car	A1	36 months	Verified	83000	0.0231	106.53
7	3 years	Studio 94 Corp	C	RENT	17/07/2021	16/03/2021	12/08/2021	Fully Paid	Good Loan	12/09/2021	1294481	car	C3	36 months	Not Verified	28000	0.126	275.96
8	10+ years	American Airlines	C	MORTGAGE	19/11/2021	14/06/2021	13/12/2021	Fully Paid	Good Loan	13/01/2022	1301833	car	C2	36 months	Verified	94800	0.2453	205.86
9	10+ years	SCI Mahanoy	A	OWN	11/06/2021	14/07/2021	14/07/2021	Fully Paid	Good Loan	14/08/2021	1291243	car	A4	36 months	Source Verified	59000	0.0665	172.1
10	10+ years	Tech Data Corp	A	MORTGAGE	02/09/2021	15/06/2021	12/10/2021	Charged Off	Bad Loan	12/11/2021	1299335	car	A5	36 months	Verified	116400	0.0394	762.08
11	10+ years	teltow contracting	B	MORTGAGE	09/02/2021	16/03/2021	16/03/2021	Fully Paid	Good Loan	16/04/2021	1298401	car	B5	60 months	Not Verified	36000	0.1773	93.21
12	10+ years	Ericsson	B	MORTGAGE	22/07/2021	13/09/2021	13/08/2021	Fully Paid	Good Loan	13/09/2021	1289131	car	B5	36 months	Not Verified	75000	0.088	181.15
13	3 years	myrvpartsplace.com	B	RENT	11/09/2021	13/03/2021	12/10/2021	Charged Off	Bad Loan	12/11/2021	1295018	car	B4	36 months	Not Verified	75000	0.2288	374.26
14	4 years	AEG LIVE	B	RENT	11/08/2021	13/10/2021	13/09/2021	Fully Paid	Good Loan	13/10/2021	1294929	car	B3	36 months	Not Verified	35000	0.0401	165.38
15	5 years	henkel corporation	B	RENT	11/12/2021	14/12/2021	14/12/2021	Fully Paid	Good Loan	14/01/2022	1249642	car	B5	36 months	Not Verified	48000	0.1533	268.36
16	4 years	AXA Assistance	B	RENT	11/10/2021	14/12/2021	14/12/2021	Fully Paid	Good Loan	14/01/2022	1293124	car	B4	36 months	Not Verified	92000	0.106	200.5
17	< 1 year	HSA-UWC	B	RENT	11/12/2021	14/02/2021	13/10/2021	Charged Off	Bad Loan	13/11/2021	1292578	car	B4	36 months	Source Verified	60000	0.063	400.99
18	1 year	Child's Day	B	RENT	02/12/2021	16/04/2021	14/12/2021	Fully Paid	Good Loan	14/01/2022	1277552	car	B1	36 months	Verified	16800	0.035	98.29
19	4 years	OEC Freight	C	RENT	09/10/2021	15/09/2021	12/11/2021	Fully Paid	Good Loan	12/12/2021	1291775	car	C2	36 months	Source Verified	40000	0.1869	343.09
20	10+ years	Sandestin Beach Hilton	B	MORTGAGE	12/12/2021	14/12/2021	14/12/2021	Fully Paid	Good Loan	14/01/2022	1291322	car	B2	36 months	Verified	35000	0.1392	162.87
21	10+ years		D	OWN	02/02/2021	16/05/2021	15/02/2021	Fully Paid	Good Loan	15/03/2021	1289636	car	D1	36 months	Not Verified	40000	0.0957	176.51
22	6 years	Norman G. Olson Insurance	A	RENT	07/07/2021	16/04/2021	10/08/2021	Fully Paid	Good Loan	10/09/2021	112227	car	A2	36 months	Not Verified	40000	0.0255	155.38
23	< 1 year		A	MORTGAGE	08/01/2021	16/05/2021	10/02/2021	Charged Off	Bad Loan	10/03/2021	183496	car	A2	36 months	Not Verified	120000	0.0767	69.14
24	< 1 year	Infotrieve, Inc.	B	MORTGAGE	09/08/2021	16/05/2021	11/06/2021	Charged Off	Bad Loan	11/07/2021	232106	car	B1	36 months	Not Verified	60000	0.1108	131.22
25	4 years	self employed	C	OWN	08/01/2021	09/12/2021	08/08/2021	Charged Off	Bad Loan	08/09/2021	211606	car	C2	36 months	Not Verified	72000	0.0512	262.26
26	10+ years	Clark County School District	A	MORTGAGE	11/01/2021	13/02/2021	12/08/2021	Charged Off	Bad Loan	12/09/2021	847024	car	A5	36 months	Not Verified	70800	0.0795	77.95
27	6 years	The Mount Sinai School of Medicin	A	MORTGAGE	11/11/2021	13/11/2021	13/06/2021	Charged Off	Bad Loan	13/07/2021	1233120	car	A3	36 months	Not Verified	80000	0.0648	124.45
28	< 1 year	Blue Ridge Design Group	A	MORTGAGE	09/06/2021	16/05/2021	09/12/2021	Charged Off	Bad Loan	09/01/2022	454145	car	A5	36 months	Not Verified	36000	0.15	385.14
29	10+ years	Abbott Nutrition	A	MORTGAGE	09/10/2021	16/05/2021	12/02/2021	Charged Off	Bad Loan	12/03/2021	544784	car	A5	36 months	Not Verified	45000	0.152	222.41
30	3 years	rice &werthmann	A	MORTGAGE	11/01/2021	16/05/2021	13/10/2021	Charged Off	Bad Loan	13/11/2021	843127	car	A5	36 months	Not Verified	86400	0.0385	280.62
31	6 years	Five County Assoc of Governments	A	MORTGAGE	11/06/2021	16/05/2021	12/07/2021	Charged Off	Bad Loan	12/08/2021	985412	car	A5	36 months	Not Verified	24600	0.0785	152.42
32	< 1 year	north ga dentention center	B	MORTGAGE	10/01/2021	10/11/2021	10/07/2021	Charged Off	Bad Loan	10/08/2021	570309	car	B2	36 months	Not Verified	30000	0.0992	164.85
33	6 years		B	MORTGAGE	11/05/2021	16/05/2021	13/01/2021	Charged Off	Bad Loan	13/02/2021	942813	car	B4	36 months	Not Verified	48000	0.2357	197.83
34	6 years	sky powersports	C	MORTGAGE	11/11/2021	14/04/2021	13/12/2021	Charged Off	Bad Loan	13/01/2022	1255647	car	C3	36 months	Not Verified	60000	0.0366	217.32
35	2 years	Synovus Bank	D	MORTGAGE	10/03/2021	12/12/2021	12/07/2021	Charged Off	Bad Loan	12/08/2021	624878	car	D4	36 months	Not Verified	34000	0.1486	210.07
36	< 1 year	ACUMEN FISCAL AGENT/MS ROBINS	A	OWN	10/05/2021	12/01/2021	11/08/2021	Charged Off	Bad Loan	11/09/2021	671773	car	A5	36 months	Not Verified	18000	0.216	148.59
37	10+ years	inspired automation inc	A	OWN	10/01/2021	12/03/2021	11/10/2021	Charged Off	Bad Loan	11/11/2021	593245	car	A1	36 months	Not Verified	43800	0.0737	148.32

Thank You!

