

SQL Queries For Loan Approval Data

Limit to 1000 rows

```
1 -- DATA
2 • SELECT *
3 FROM loan_data;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

Loan_ID	Gender	Married	Dependents	Education	Self_Employed	ApplicantIncome	CoapplicantIncome	LoanAmount	Loan_Amount_Term	Credit_History	Property_Area	Loan_Status
LP001003	Male	Yes	1	Graduate	No	4583	1508	128	360	1	Rural	N
LP001005	Male	Yes	0	Graduate	Yes	3000	0	66	360	1	Urban	Y
LP001006	Male	Yes	0	Not Graduate	No	2583	2358	120	360	1	Urban	Y
LP001008	Male	No	0	Graduate	No	6000	0	141	360	1	Urban	Y
LP001013	Male	Yes	0	Not Graduate	No	2333	1516	95	360	1	Urban	Y
LP001024	Male	Yes	2	Graduate	No	3200	700	70	360	1	Urban	Y
LP001027	Male	Yes	2	Graduate	No	2500	1840	109	360	1	Urban	Y
LP001029	Male	No	0	Graduate	No	1853	2840	114	360	1	Rural	N
LP001030	Male	Yes	2	Graduate	No	1299	1086	17	120	1	Urban	Y
LP001032	Male	No	0	Graduate	No	4950	0	125	360	1	Urban	Y
LP001036	Female	No	0	Graduate	No	3510	0	76	360	0	Urban	N
LP001038	Male	Yes	0	Not Graduate	No	4887	0	133	360	1	Rural	N
LP001043	Male	Yes	0	Not Graduate	No	7660	0	104	360	0	Urban	N
LP001047	Male	Yes	0	Not Graduate	No	2600	1911	116	360	0	Semiurban	N
LP001050	Male	Yes	2	Not Graduate	No	3365	1917	112	360	0	Rural	N
LP001068	Male	Yes	0	Graduate	No	2799	2253	122	360	1	Semiurban	Y
LP001073	Male	Yes	2	Not Graduate	No	4226	1040	110	360	1	Urban	Y
LP001086	Male	No	0	Not Graduate	No	1442	0	35	360	1	Urban	N
LP001087	Female	No	2	Graduate	No	3750	2083	120	360	1	Semiurban	Y
LP001095	Male	No	0	Graduate	No	3167	0	74	360	1	Urban	N
LP001097	Male	No	1	Graduate	Yes	4692	0	106	360	1	Rural	N
LP001098	Male	Yes	0	Graduate	No	3500	1667	114	360	1	Semiurban	Y

```
9 -- 1. What is the average loan amount by credit history status?
10 • SELECT Credit_History, AVG(LoanAmount) AS avg_loan_amount
11 FROM loan_data
12 GROUP BY Credit_History;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

Credit_History	avg_loan_amount
1	103.9809
0	108.2391

```
14 -- 2. How many loans were approved versus rejected?
15 • SELECT Loan_Status, COUNT(*) AS count
16 FROM loan_data
17 GROUP BY Loan_Status;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

Loan_Status	count
N	91
Y	217

```

19  -- 3. How many loans were approved for male applicants versus female applicants?
20 • SELECT Gender, Loan_Status, COUNT(*) AS count
21 FROM loan_data
22 WHERE Gender = 'Male' or Gender = 'Female'
23 GROUP BY Gender, Loan_Status;
24
25

```

<

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

	Gender	Loan_Status	count
▶	Male	N	63
	Male	Y	170
	Female	N	24
	Female	Y	46

```

26  -- 4. Is there a difference in loan approval rates between married and unmarried applicants?
27 • SELECT Married, Loan_Status, COUNT(*) AS count
28 FROM loan_data
29 GROUP BY Married, Loan_Status;
30
31  -- 5. How does the education level of the applicant relate to loan approval status?
32 • SELECT Education, Loan_Status, COUNT(*) AS count
33 FROM loan_data
34 GROUP BY Education, Loan_Status;
35

```

<

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

	Education	Loan_Status	count
▶	Graduate	N	65
	Graduate	Y	167
	Not Graduate	Y	50
	Not Graduate	N	26

```

31  -- 5. How does the education level of the applicant relate to loan approval status?
32 • SELECT Education, Loan_Status, COUNT(*) AS count
33 FROM loan_data
34 GROUP BY Education, Loan_Status;
35

```

<

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

	Education	Loan_Status	count
▶	Graduate	N	65
	Graduate	Y	167
	Not Graduate	Y	50
	Not Graduate	N	26

```

40  -- 6. Are self-employed individuals more or less likely to get their loans approved?
41  • SELECT Self_Employed, Loan_Status, COUNT(*) AS count
42  FROM loan_data
43  WHERE Self_Employed = 'Yes' or Self_Employed = 'No'
44  GROUP BY Self_Employed, Loan_Status;

```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: [IA](#)

	Self_Employed	Loan_Status	count
▶	No	N	77
	Yes	Y	15
	No	Y	187
	Yes	N	10

```

48  -- 7. How does the location of the property (urban, semiurban, rural) influence loan approval?
49  • SELECT Property_Area, Loan_Status, COUNT(*) AS count
50  FROM loan_data
51  GROUP BY Property_Area, Loan_Status
52  ORDER BY count DESC;

```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: [IA](#)

	Property_Area	Loan_Status	count
▶	Semiurban	Y	102
	Urban	Y	64
	Rural	Y	51
	Rural	N	35
	Urban	N	32
	Semiurban	N	24

```

56  -- 8. Does the number of dependents impact the likelihood of loan approval?
57  • SELECT Dependents, Loan_Status, COUNT(*) AS count
58  FROM loan_data
59  GROUP BY Dependents, Loan_Status
60  ORDER BY count DESC;

```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: [IA](#)

	Dependents	Loan_Status	count
▶	0	Y	146
	0	N	62
	2	Y	39
	1	Y	32
	2	N	15
	1	N	14

```

64 -- 9. How does the term of the loan (in months) influence loan approval?
65 • SELECT Loan_Amount_Term, Loan_Status, COUNT(*) AS count
66 FROM loan_data
67 GROUP BY Loan_Amount_Term, Loan_Status
68 ORDER BY count DESC;
69

```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: [IA](#)

	Loan_Amount_Term	Loan_Status	count
▶	360	Y	190
	360	N	73
	180	Y	16
	180	N	8
	480	N	6
	120	Y	3
	300	N	3
	480	Y	3
	300	Y	2
	84	Y	2
	240	Y	1
	36	N	1

```

71 -- 10. Is there a correlation between income groups and loan approval status?
72 • SELECT
73     CASE
74         WHEN ApplicantIncome < ( SELECT avg(ApplicantIncome) FROM loan_data ) THEN 'Below Average'
75         ELSE 'Above Average'
76     END AS income_group,
77     Loan_Status,
78     COUNT(*) AS count
79 FROM loan_data
80 GROUP BY income_group, Loan_Status
81 ORDER BY count DESC;
82

```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: [IA](#)

	income_group	Loan_Status	count
▶	Below Average	Y	128
	Above Average	Y	89
	Below Average	N	50
	Above Average	N	41

```

86  -- 11. How does the combined income of applicants and co-applicants relate to loan approval?
87  • SELECT
88      CASE
89          WHEN ApplicantIncome + CoapplicantIncome < (SELECT AVG(ApplicantIncome) FROM loan_data) THEN 'Below Avg Applicant Income'
90          WHEN ApplicantIncome + CoapplicantIncome >= (SELECT AVG(ApplicantIncome) FROM loan_data) THEN 'Above Avg Applicant Income'
91
92      END AS combined_income_group,
93      Loan_Status,
94      COUNT(*) AS count
95  FROM loan_data
96  GROUP BY combined_income_group, Loan_Status;
97

```

combined_income_group	Loan_Status	count
Above Avg Applicant Income	N	66
Below Avg Applicant Income	Y	37
Above Avg Applicant Income	Y	180
Below Avg Applicant Income	N	25

```

101  -- 12. Does the combination of credit history and property area provide additional insights into loan approval?
102  • SELECT Property_Area, Credit_History, Loan_Status, COUNT(*) AS count
103  FROM loan_data
104  GROUP BY Property_Area, Credit_History, Loan_Status
105  ORDER BY count DESC;
106
107

```

Property_Area	Credit_History	Loan_Status	count
Semiurban	1	Y	101
Urban	1	Y	64
Rural	1	Y	49
Rural	1	N	20
Urban	1	N	19
Semiurban	0	N	15
Rural	0	N	15
Urban	0	N	13
Semiurban	1	N	9
Rural	0	Y	2
Semiurban	0	Y	1

```

110  -- 13. How does the combination of education level and employment status affect loan approval?
111  • SELECT Education, Self_Employed, Loan_Status, COUNT(*) AS count
112  FROM loan_data
113  WHERE Self_Employed = 'Yes' or Self_Employed = 'No'
114  GROUP BY Education, Self_Employed, Loan_Status
115  ORDER BY count DESC;
116
117

```

Education	Self_Employed	Loan_Status	count
Graduate	No	Y	145
Graduate	No	N	54
Not Graduate	No	Y	42
Not Graduate	No	N	23
Graduate	Yes	Y	11
Graduate	Yes	N	8
Not Graduate	Yes	Y	4
Not Graduate	Yes	N	2

```

121 -- 14. Is there a correlation between loan amount and property area in terms of loan approval?
122 • SELECT Property_Area,
123 CASE
124     WHEN LoanAmount < (SELECT AVG(LoanAmount) FROM loan_data) THEN 'Below Avg'
125     WHEN LoanAmount >= (SELECT AVG(LoanAmount) FROM loan_data) THEN 'Above Avg'
126
127 END AS loan_amount_range,
128 Loan_Status,
129 COUNT(*) AS count
130 FROM loan_data
131 GROUP BY Property_Area, loan_amount_range, Loan_Status;
132

```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: [IA](#)

	Property_Area	loan_amount_range	Loan_Status	count
▶	Rural	Above Avg	N	25
	Urban	Below Avg	Y	31
	Urban	Above Avg	Y	33
	Urban	Below Avg	N	20
	Semiurban	Above Avg	N	11
	Semiurban	Above Avg	Y	61
	Urban	Above Avg	N	12
	Semiurban	Below Avg	Y	41
	Rural	Below Avg	N	10
	Rural	Above Avg	Y	39
	Semiurban	Below Avg	N	13
	Rural	Below Avg	Y	12

```

137 -- 15. How does the number of dependents and education level jointly influence loan approval?
138 • SELECT Dependents, Education, Loan_Status, COUNT(*) AS count
139 FROM loan_data
140 GROUP BY Dependents, Education, Loan_Status
141 ORDER BY count DESC;

```



Result Grid | Filter Rows: | Export: | Wrap Cell Content: [IA](#)

	Dependents	Education	Loan_Status	count
▶	0	Graduate	Y	116
	0	Graduate	N	45
	0	Not Graduate	Y	30
	2	Graduate	Y	27
	1	Graduate	Y	24
	0	Not Graduate	N	17
	2	Not Graduate	Y	12
	1	Graduate	N	10
	2	Graduate	N	10
	1	Not Graduate	Y	8
	2	Not Graduate	N	5
	1	Not Graduate	N	4

```

143  -- 16. What is the distribution of credit history among different property areas?
144  • SELECT Property_Area, Credit_History, COUNT(*) AS count
145  FROM loan_data
146  GROUP BY Property_Area, Credit_History
147  ORDER BY count DESC;
148  |



```

Result Grid			
Filter Rows: <input type="text"/>			
Export:  Wrap Cell Content: 			
	Property_Area	Credit_History	count
▶	Semiurban	1	110
	Urban	1	83
	Rural	1	69
	Rural	0	17
	Semiurban	0	16
	Urban	0	13

```

--
149  -- 17. Are there any trends in loan approval status based on the loan amount term?
150  • SELECT Loan_Amount_Term, Loan_Status, COUNT(*) AS count
151  FROM loan_data
152  GROUP BY Loan_Amount_Term, Loan_Status
153  ORDER BY count DESC;
154  |

```

Result Grid			
Filter Rows: <input type="text"/>			
Export:  Wrap Cell Content: 			
	Loan_Amount_Term	Loan_Status	count
▶	360	Y	190
	360	N	73
	180	Y	16
	180	N	8
	480	N	6
	120	Y	3
	300	N	3
	480	Y	3
	300	Y	2
	84	Y	2
	240	Y	1
	36	N	1

```

160  -- 19. What is the average loan amount for self-employed applicants compared to non-self-employed ones?
161 • SELECT Self_Employed, AVG(LoanAmount) AS avg_loan_amount
162 FROM loan_data
163 WHERE Self_Employed = 'Yes' or Self_Employed = 'No'
164 GROUP BY Self_Employed;
165

```

Result Grid			Filter Rows:	Export:	Wrap Cell Content:
	Self_Employed	avg_loan_amount			
▶	No	104,4015			
	Yes	104,3200			

```

155  -- 18. What is the average income of applicants in each property area?
156 • SELECT Property_Area, AVG(ApplicantIncome) AS avg_income
157 FROM loan_data
158 GROUP BY Property_Area;
159

```

Result Grid			Filter Rows:	Export:	Wrap Cell Content:
	Property_Area	avg_income			
▶	Rural	3708.0465			
	Urban	3443.7083			
	Semiurban	3441.1190			

```

166  -- 20. Are there any significant differences in loan approval rates for different education levels in various property areas?
167 • SELECT
168     Education,
169     Property_Area,
170     Loan_Status,
171     COUNT(*) AS count
172 FROM loan_data
173 GROUP BY Education, Property_Area, Loan_Status
174 ORDER BY count DESC;
175

```

Result Grid			Filter Rows:	Export:	Wrap Cell Content:
	Education	Property_Area	Loan_Status	count	
▶	Graduate	Semiurban	Y	79	
	Graduate	Urban	Y	51	
	Graduate	Rural	Y	37	
	Graduate	Urban	N	24	
	Not Graduate	Semiurban	Y	23	
	Graduate	Rural	N	21	
	Graduate	Semiurban	N	20	
	Not Graduate	Rural	N	14	
	Not Graduate	Rural	Y	14	
	Not Graduate	Urban	Y	13	
	Not Graduate	Urban	N	8	
	Not Graduate	Semiurban	N	4	

SQL Queries

-- 1. What is the average loan amount by credit history status?

```
SELECT Credit_History, AVG(LoanAmount) AS avg_loan_amount  
  
FROM loan_data  
  
GROUP BY Credit_History;
```

-- 2. How many loans were approved versus rejected?

```
SELECT Loan_Status, COUNT(*) AS count  
  
FROM loan_data  
  
GROUP BY Loan_Status;
```

-- 3. How many loans were approved for male applicants versus female applicants?

```
SELECT Gender, Loan_Status, COUNT(*) AS count  
  
FROM loan_data  
  
WHERE Gender = 'Male' or Gender = 'Female'  
  
GROUP BY Gender, Loan_Status;
```

-- 4. Is there a difference in loan approval rates between married and unmarried applicants?

```
SELECT Married, Loan_Status, COUNT(*) AS count  
  
FROM loan_data  
  
GROUP BY Married, Loan_Status;
```

-- 5. How does the education level of the applicant relate to loan approval status?

```
SELECT Education, Loan_Status, COUNT(*) AS count  
  
FROM loan_data  
  
GROUP BY Education, Loan_Status;
```

-- 6. Are self-employed individuals more or less likely to get their loans approved?

```
SELECT Self_Employed, Loan_Status, COUNT(*) AS count  
  
FROM loan_data  
  
WHERE Self_Employed = 'Yes' or Self_Employed = 'No'  
  
GROUP BY Self_Employed, Loan_Status;
```

-- 7. How does the location of the property (urban, semiurban, rural) influence loan approval?

```
SELECT Property_Area, Loan_Status, COUNT(*) AS count  
  
FROM loan_data  
  
GROUP BY Property_Area, Loan_Status  
  
ORDER BY count DESC;
```

-- 8. Does the number of dependents impact the likelihood of loan approval?

```
SELECT Dependents, Loan_Status, COUNT(*) AS count  
  
FROM loan_data  
  
GROUP BY Dependents, Loan_Status  
  
ORDER BY count DESC;
```

-- 9. How does the term of the loan (in months) influence loan approval?

```
SELECT Loan_Amount_Term, Loan_Status, COUNT(*) AS count
FROM loan_data
GROUP BY Loan_Amount_Term, Loan_Status
ORDER BY count DESC;
```

-- 10. Is there a correlation between income groups and loan approval status?

```
SELECT
CASE
    WHEN ApplicantIncome < ( SELECT avg(ApplicantIncome) FROM loan_data ) THEN 'Below Average'
    ELSE 'Above Average'
END AS income_group,
Loan_Status,
COUNT(*) AS count
FROM loan_data
GROUP BY income_group, Loan_Status
ORDER BY count DESC;
```

-- 11. How does the combined income of applicants and co-applicants relate to loan approval?

```
SELECT

    CASE

        WHEN ApplicantIncome + CoapplicantIncome < (SELECT AVG(ApplicantIncome) FROM loan_data)
        THEN 'Below Avg Applicant Income'

        WHEN ApplicantIncome + CoapplicantIncome >= (SELECT AVG(ApplicantIncome) FROM loan_data)
        THEN 'Above Avg Applicant Income'

    END AS combined_income_group,

    Loan_Status,

    COUNT(*) AS count

FROM loan_data

GROUP BY combined_income_group, Loan_Status;
```

-- 12. Does the combination of credit history and property area provide additional insights into loan approval?

```
SELECT Property_Area, Credit_History, Loan_Status, COUNT(*) AS count

FROM loan_data

GROUP BY Property_Area, Credit_History, Loan_Status

ORDER BY count DESC;
```

-- 13. How does the combination of education level and employment status affect loan approval?

```
SELECT Education, Self_Employed, Loan_Status, COUNT(*) AS count

FROM loan_data

WHERE Self_Employed = 'Yes' or Self_Employed = 'No'

GROUP BY Education, Self_Employed, Loan_Status

ORDER BY count DESC;
```

-- 14. Is there a correlation between loan amount and property area in terms of loan approval?

```
SELECT Property_Area,  
  
    CASE  
  
        WHEN LoanAmount < (SELECT AVG(LoanAmount) FROM loan_data) THEN 'Below Avg'  
  
        WHEN LoanAmount >= (SELECT AVG(LoanAmount) FROM loan_data) THEN 'Above Avg'  
  
    END AS loan_amount_range,  
  
    Loan_Status,  
  
    COUNT(*) AS count  
FROM loan_data  
  
GROUP BY Property_Area, loan_amount_range, Loan_Status;
```

-- 15. How does the number of dependents and education level jointly influence loan approval?

```
SELECT Dependents, Education, Loan_Status, COUNT(*) AS count  
  
FROM loan_data  
  
GROUP BY Dependents, Education, Loan_Status  
  
ORDER BY count DESC;
```

-- 16. What is the distribution of credit history among different property areas?

```
SELECT Property_Area, Credit_History, COUNT(*) AS count  
  
FROM loan_data  
  
GROUP BY Property_Area, Credit_History  
  
ORDER BY count DESC;
```

-- 17. Are there any trends in loan approval status based on the loan amount term?

```
SELECT Loan_Amount_Term, Loan_Status, COUNT(*) AS count
FROM loan_data
GROUP BY Loan_Amount_Term, Loan_Status
ORDER BY count DESC;
```

-- 18. What is the average income of applicants in each property area?

```
SELECT Property_Area, AVG(ApplicantIncome) AS avg_income
FROM loan_data
GROUP BY Property_Area;
```

-- 19. What is the average loan amount for self-employed applicants compared to non-self-employed ones?

```
SELECT Self_Employed, AVG(LoanAmount) AS avg_loan_amount
FROM loan_data
WHERE Self_Employed = 'Yes' or Self_Employed = 'No'
GROUP BY Self_Employed;
```

-- 20. Are there any significant differences in loan approval rates for different education levels in various property areas?

```
SELECT
    Education,
    Property_Area,
    Loan_Status,
    COUNT(*) AS count
FROM loan_data
GROUP BY Education, Property_Area, Loan_Status
ORDER BY count DESC;
```