

--Here I will check for columns that contain NULL values, which can affect your analysis and may need to be addressed.

SELECT

```
COUNT(*) AS total_rows,
SUM(CASE WHEN credit_policy IS NULL THEN 1 ELSE 0 END) AS missing_credit_policy,
SUM(CASE WHEN purpose IS NULL THEN 1 ELSE 0 END) AS missing_purpose,
SUM(CASE WHEN int_rate IS NULL THEN 1 ELSE 0 END) AS missing_int_rate,
SUM(CASE WHEN installment IS NULL THEN 1 ELSE 0 END) AS missing_installment,
SUM(CASE WHEN log_annual_inc IS NULL THEN 1 ELSE 0 END) AS missing_log_annual_inc,
SUM(CASE WHEN dti IS NULL THEN 1 ELSE 0 END) AS missing_dti,
SUM(CASE WHEN fico IS NULL THEN 1 ELSE 0 END) AS missing_fico,
SUM(CASE WHEN revol_bal IS NULL THEN 1 ELSE 0 END) AS missing_revol_bal,
SUM(CASE WHEN revol_util IS NULL THEN 1 ELSE 0 END) AS missing_revol_util,
SUM(CASE WHEN inq_last_6mths IS NULL THEN 1 ELSE 0 END) AS missing_inq_last_6mths,
SUM(CASE WHEN delinq_2yrs IS NULL THEN 1 ELSE 0 END) AS missing_delinq_2yrs,
SUM(CASE WHEN pub_rec IS NULL THEN 1 ELSE 0 END) AS missing_pub_rec,
SUM(CASE WHEN not_fully_paid IS NULL THEN 1 ELSE 0 END) AS missing_not_fully_paid
```

FROM

dbo.loandata;

--Here, I will look for data points that don't make sense, such as a FICO score that's too low to be realistic: FICO scores below a reasonable threshold (500) or Interest rates that are negative or too high.

SELECT

```
COUNT(*) AS anomalous_fico_count
```

FROM

dbo.loandata

WHERE

fico < 500;

SELECT

```
COUNT(*) AS anomalous_interest_count
```

FROM

dbo.loandata

WHERE

int_rate < 0 OR int_rate > 1;

--Here, I want to ensure that the data is consistent. I want to make sure that loans marked as not fully paid have a non-zero balance.

SELECT

```
COUNT(*) AS inconsistent_records
```

FROM

dbo.loandata

WHERE

not_fully_paid = 1 AND revol_bal = 0;

--Assuming I have determined that the inconsistency is indeed an error and the revol_bal should be greater than 0, I will set it to a NULL.

UPDATE dbo.loandata

SET revol_bal = NULL

WHERE not_fully_paid = 1 AND revol_bal = 0;

--Duplicate records can skew my results, so I wanted to identify and remove any
duplicates from my dataset.

SELECT

credit_policy, purpose, int_rate, installment, log_annual_inc, dti, fico,
days_with_cr_line,
revol_bal, revol_util, inq_last_6mths, delinq_2yrs, pub_rec, not_fully_paid, COUNT
(*) AS DuplicateCount

FROM

dbo.loandata

GROUP BY

credit_policy, purpose, int_rate, installment, log_annual_inc, dti, fico,
days_with_cr_line,
revol_bal, revol_util, inq_last_6mths, delinq_2yrs, pub_rec, not_fully_paid

HAVING

COUNT(*) > 1;