

Validation Report for kaggle - customer_churn_dataset_kaggle_20250314192043.csv

Issues:

missing_data - customerID: 0 missing (0.00%)

missing_data - gender: 0 missing (0.00%)

missing_data - SeniorCitizen: 0 missing (0.00%)

missing_data - Partner: 0 missing (0.00%)

missing_data - Dependents: 0 missing (0.00%)

missing_data - tenure: 0 missing (0.00%)

missing_data - PhoneService: 0 missing (0.00%)

missing_data - MultipleLines: 0 missing (0.00%)

missing_data - InternetService: 0 missing (0.00%)

missing_data - OnlineSecurity: 0 missing (0.00%)

missing_data - OnlineBackup: 0 missing (0.00%)

missing_data - DeviceProtection: 0 missing (0.00%)

missing_data - TechSupport: 0 missing (0.00%)

missing_data - StreamingTV: 0 missing (0.00%)

missing_data - StreamingMovies: 0 missing (0.00%)

missing_data - Contract: 0 missing (0.00%)

missing_data - PaperlessBilling: 0 missing (0.00%)

missing_data - PaymentMethod: 0 missing (0.00%)

missing_data - MonthlyCharges: 0 missing (0.00%)

missing_data - TotalCharges: 0 missing (0.00%)

missing_data - Churn: 0 missing (0.00%)

tenure: 0 out of 7043 rows (0.00%) are outside the expected range (0, 100).

MonthlyCharges: 0 out of 7043 rows (0.00%) are outside the expected range (0, 500).

TotalCharges: 0 out of 7043 rows (0.00%) are outside the expected range (0, 10000).

gender: 0 invalid values out of 7043 rows (0.00%). (All values valid)

InternetService: 0 invalid values out of 7043 rows (0.00%). (All values valid)

PaymentMethod: Unique values: ['Electronic check', 'Mailed check', 'Bank transfer (automatic)', 'Credit card (automatic)']

StreamingTV: Unique values: ['No', 'Yes', 'No internet service']

PaperlessBilling: Unique values: ['Yes', 'No']

OnlineBackup: Unique values: ['Yes', 'No', 'No internet service']

OnlineSecurity: Unique values: ['No', 'Yes', 'No internet service']

PhoneService: Unique values: ['No', 'Yes']

Contract: Unique values: ['Month-to-month', 'One year', 'Two year']

TechSupport: Unique values: ['No', 'Yes', 'No internet service']

Partner: Unique values: ['Yes', 'No']

Dependents: Unique values: ['No', 'Yes']

Churn: Unique values: ['No', 'Yes']

StreamingMovies: Unique values: ['No', 'Yes', 'No internet service']

MultipleLines: Unique values: ['No phone service', 'No', 'Yes']

DeviceProtection: Unique values: ['No', 'Yes', 'No internet service']

duplicates: 0 duplicate rows found out of 7043 rows (0.00%).

outliers - tenure: 0 out of 7043 rows (0.00%) are outliers.

outliers - MonthlyCharges: 0 out of 7043 rows (0.00%) are outliers.

outliers - TotalCharges: 0 out of 7043 rows (0.00%) are outliers.

Resolutions:

missing_data - customerID: No action needed.

missing_data - gender: No action needed.

missing_data - SeniorCitizen: No action needed.

missing_data - Partner: No action needed.

missing_data - Dependents: No action needed.

missing_data - tenure: No action needed.

missing_data - PhoneService: No action needed.

missing_data - MultipleLines: No action needed.

missing_data - InternetService: No action needed.

missing_data - OnlineSecurity: No action needed.

missing_data - OnlineBackup: No action needed.

missing_data - DeviceProtection: No action needed.

missing_data - TechSupport: No action needed.

missing_data - StreamingTV: No action needed.

missing_data - StreamingMovies: No action needed.

missing_data - Contract: No action needed.

missing_data - PaperlessBilling: No action needed.

missing_data - PaymentMethod: No action needed.

missing_data - MonthlyCharges: No action needed.

missing_data - TotalCharges: No action needed.

missing_data - Churn: No action needed.

tenure: Review and correct data entries or adjust the expected range if appropriate.

MonthlyCharges: Review and correct data entries or adjust the expected range if appropriate.

TotalCharges: Review and correct data entries or adjust the expected range if appropriate.

gender: Review unexpected categorical values and consider mapping them to valid values.

InternetService: Review unexpected categorical values and consider mapping them to valid values.

PaymentMethod: No specific resolution suggested.

StreamingTV: No specific resolution suggested.

PaperlessBilling: No specific resolution suggested.

OnlineBackup: No specific resolution suggested.

OnlineSecurity: No specific resolution suggested.

PhoneService: No specific resolution suggested.

Contract: No specific resolution suggested.

TechSupport: No specific resolution suggested.

Partner: No specific resolution suggested.

Dependents: No specific resolution suggested.

Churn: No specific resolution suggested.

StreamingMovies: No specific resolution suggested.

MultipleLines: No specific resolution suggested.

DeviceProtection: No specific resolution suggested.

duplicates: Consider removing duplicate rows based on 'customerID'.

outliers - tenure: Review outlier values; consider transformation or removal if they are errors.

outliers - MonthlyCharges: Review outlier values; consider transformation or removal if they are errors.

outliers - TotalCharges: Review outlier values; consider transformation or removal if they are errors.