

Fairfluence Report

Dataset Summary

Metric	Value
Number of Columns	15
Number of Records	1000
Total Cells	15000
Missing Cells	0
Missing Percentage	0.00%
Duplicate Records	0
Duplicate Percentage	0.00%
Memory Usage	484.79 KB
Average Record Size	496.42 Bytes

Column Type Summary

Column Type	Count
Categorical Columns	7
Numeric Columns	6
Text Columns	2

Alerts

Level	Message
Info	Column "student_id" has no missing values
Info	Column "student_id" has all unique values
Info	Column "name" has no missing values
Info	Column "name" has all unique values
Info	Column "gender" has no missing values
Info	Column "age" has no missing values
Info	Column "grade_level" has no missing values
Info	Column "math_score" has no missing values
Info	Column "reading_score" has no missing values
Info	Column "writing_score" has no missing values
Info	Column "attendance_rate" has no missing values
Info	Column "attendance_rate" has all unique values
Info	Column "parent_education" has no missing values
Info	Column "study_hours" has no missing values
Info	Column "study_hours" has all unique values
Info	Column "internet_access" has no missing values
Info	Column "lunch_type" has no missing values

Info	Column "extra_activities" has no missing values
Info	Column "final_result" has no missing values

Quality Results

F1 Score Report

F1 Score (Original)	F1 Score (Statistic)	F1 Score (Influence)
0.5417	0.5417	0.5417

Outlier Summary

Influence Outliers (Count)	Influence Outliers (%)	Mahalanobis Outliers (Count)	Mahalanobis Outliers (%)	Overlap (Count)
0	0.0	0	0.0	0

Fairness Results

Top Patterns

Pattern Column 1	Pattern Value 1	Support	Responsibility	Interestingness
grade_level	(11.0, 12.0]	0.2275	3.7712	16.5768
lunch_type	Free or reduced	0.4938	5.0655	10.2591
writing_score	(84.0, 99.0]	0.325	2.7606	8.4941
parent_education	PhD	0.2438	1.9759	8.1064
study_hours	(3.585, 4.998]	0.3338	2.2618	6.777

Fairness (No Influence)

Sensitive Feature	DPD	DPD Fair	EOD	EOD Fair	PPV Diff	PPV Fair
gender	0.4412	No	0.4786	No	0.1431	No
age	0.0702	Yes	0.1399	No	0.166	No

Fairness (With Influence)

Influence Group	Positive Group	Mean (Positive)	Mean (Other)	Mean Difference	Influence Fair
grade_level	(11.0, 12.0]	nan	-6.9e-07	nan	No
lunch_type	Free or reduced	7.12e-05	-7.081e-05	0.00014201	Yes
writing_score	(84.0, 99.0]	nan	-6.9e-07	nan	No
parent_education	PhD	-5.73e-06	9.3e-07	6.66e-06	Yes
study_hours	(3.585, 4.998]	nan	-6.9e-07	nan	No