

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)
0.5477	0.5477	0.5477

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
reading_score	(49.999, 66.0]	0.3125	7914.9145	25327.7264
grade_level	(10.0, 11.0]	0.255	5591.0257	21925.5908
lunch_type	Standard	0.5062	8170.6053	16139.4672
writing_score	(49.999, 67.333]	0.3338	4294.5301	12867.506
math_score	(49.999, 68.0]	0.325	4125.3092	12693.259

Fairness (No Influence)

Sensitive Feature	DPD	DPD Fair	EOD	EOD Fair	PPV Diff	PPV Fair
gender	0.4559	No	0.5393	No	0.1359	No
age	0.0976	Yes	0.1626	No	0.1285	No

Fairness (With Influence)

Influence Group	Positive Group	Mean (Positive)	Mean (Other)	Mean Difference	Influence Fair
reading_score	(49.999, 66.0]	nan	-1.264e-05	nan	No
grade_level	(10.0, 11.0]	nan	-1.264e-05	nan	No
lunch_type	Standard	-7.692e-05	5.327e-05	0.0001302	Yes
writing_score	(49.999, 67.333]	nan	-1.264e-05	nan	No
math_score	(49.999, 68.0]	nan	-1.264e-05	nan	No