Fairfluence Report

Dataset Summary

Metric	Value
Number of Columns	15
Number of Records	32561
Total Cells	488415
Missing Cells	0
Missing Percentage	0.00%
Duplicate Records	24
Duplicate Percentage	0.07%
Memory Usage	18070.45 KB
Average Record Size	568.29 Bytes

Column Type Summary

Column Type	Count
Categorical Columns	10
Numeric Columns	5
Text Columns	0

Alerts

Level	Message
Info	Column "age" has no missing values
Info	Column "workclass" has no missing values
Info	Column "fnlwgt" has no missing values
Info	Column "education" has no missing values
Info	Column "education.num" has no missing values
Info	Column "marital.status" has no missing values
Info	Column "occupation" has no missing values
Info	Column "relationship" has no missing values
Info	Column "race" has no missing values
Info	Column "sex" has no missing values
Info	Column "capital.gain" has no missing values
Info	Column "capital.loss" has no missing values
Info	Column "hours.per.week" has no missing values
Info	Column "native.country" has no missing values
Info	Column "income" has no missing values

Quality Results

F1 Score Report

F1 Score (Original)	F1 Score (Statistic)	F1 Score (Influence)
0.3673	0.3107	0.3719

Outlier Summary

Influence Outliers (Count)	Influence Outliers (%)	Mahalanobis Outliers (Count)	Mahalanobis Outliers (%)	Overlap (Count)
1270	3.9004	2031	6.2375	125

Fairness Results

Top Patterns

Pattern Column 1	Pattern Value 1	Support	Responsibility	Interestingness
race	Black	0.0977	110.3882	1129.82
occupation	Exec-managerial	0.1237	133.6344	1080.6921
occupation	Machine-op-inspct	0.0627	54.7208	872.8528
sex	Female	0.3309	281.857	851.9159
education	Masters	0.0539	38.0601	706.1177

Fairness (No Influence)

Sensitive Feature	DPD	DPD Fair	EOD	EOD Fair	PPV Diff	PPV Fair
age	0.4917	No	0.8333	No	1.0	No
marital.status	0.3853	No	0.6606	No	1.0	No
occupation	0.4935	No	1.0	No	1.0	No
race	0.1514	No	0.6125	No	0.7399	No
sex	0.1754	No	0.0794	Yes	0.0431	Yes
native.country	0.6667	No	1.0	No	1.0	No

Fairness (With Influence)

Influence Group	Positive Group	Mean (Positive)	Mean (Other)	Mean Difference	Influence Fair
race	Black	9e-08	-2e-08	1.1e-07	Yes
occupation	Exec-managerial	7e-08	-2e-08	9e-08	Yes
occupation	Machine-op-inspct	5e-08	-1e-08	6e-08	Yes
sex	Female	1.9e-07	-1e-07	2.9e-07	Yes
education	Masters	8e-08	-1e-08	9e-08	Yes