

Bland-Altman Agreement Plot

Standalone verified Python analysis

Test: Bland-Altman Agreement Plot

Design: Pairwise agreement of G1 and G3 on the original grade scale.

Variables: G1, G3

Null hypothesis: The mean G3-minus-G1 bias is zero and differences show no magnitude pattern.

Formula: $d_i = G3_i - G1_i$; $\text{bias} = \text{mean}(d)$; 95% limits = $\text{bias} \pm 1.96 \text{ SD}(d)$.

Source rows: 649

Calculated metrics:

mean_bias: 0.5069337442218799

sd_difference: 1.8207560150339774

lower_limit: -3.061748045244716

upper_limit: 4.075615533688476

n_pairs: 649

Independent reference values:

mean_bias: 0.5069337442218799

sd_difference: 1.8207560150339774

lower_limit: -3.061748045244716

upper_limit: 4.075615533688476

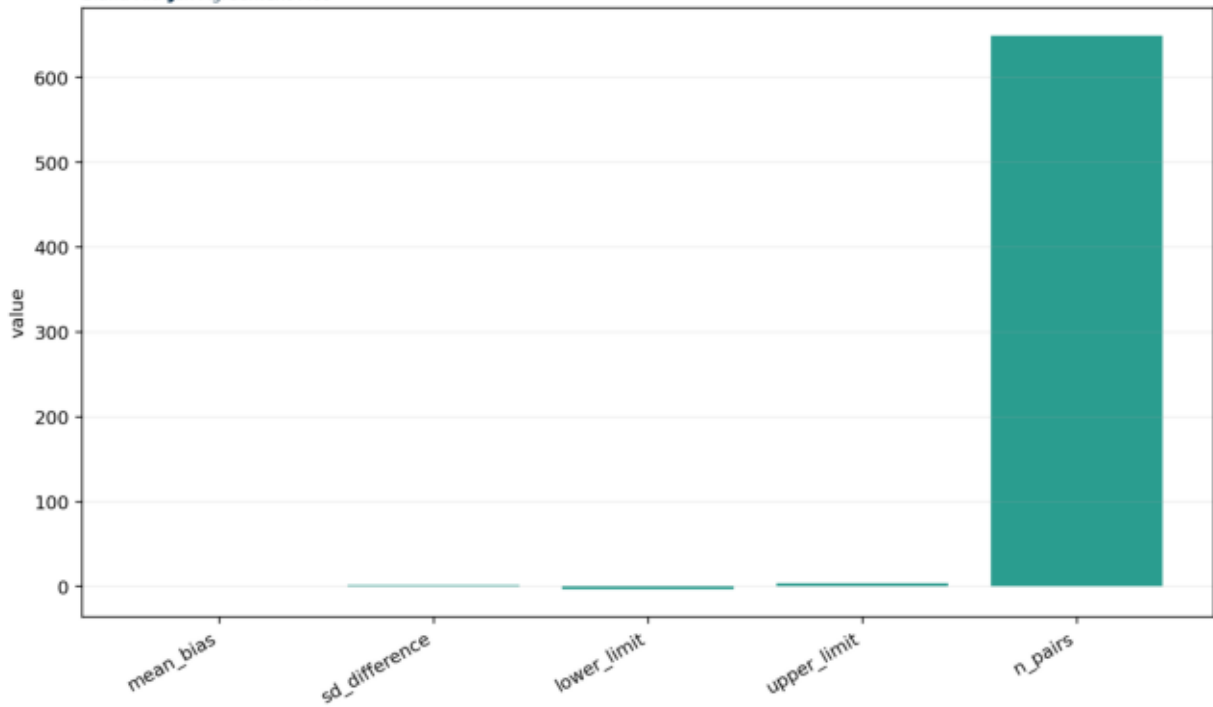
n_pairs: 649

Interpretation:

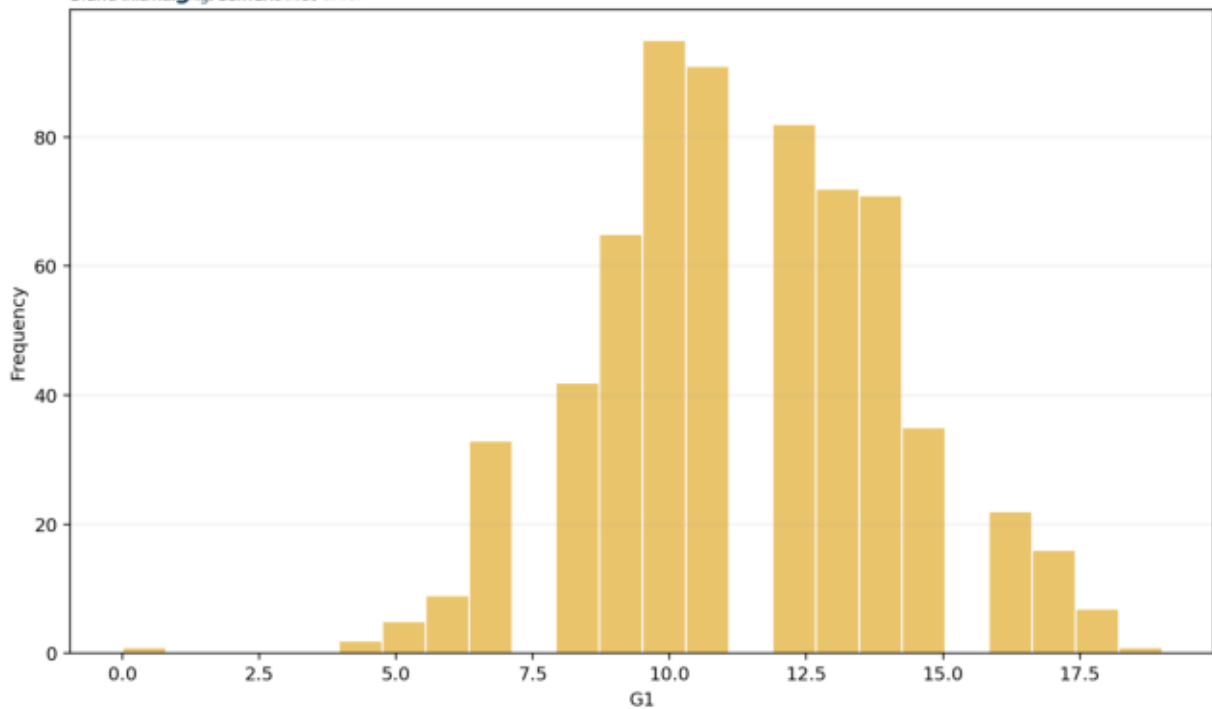
Agreement is evaluated on differences, not by correlation alone.

Bias=0.506934; limits [-3.061748, 4.075616].

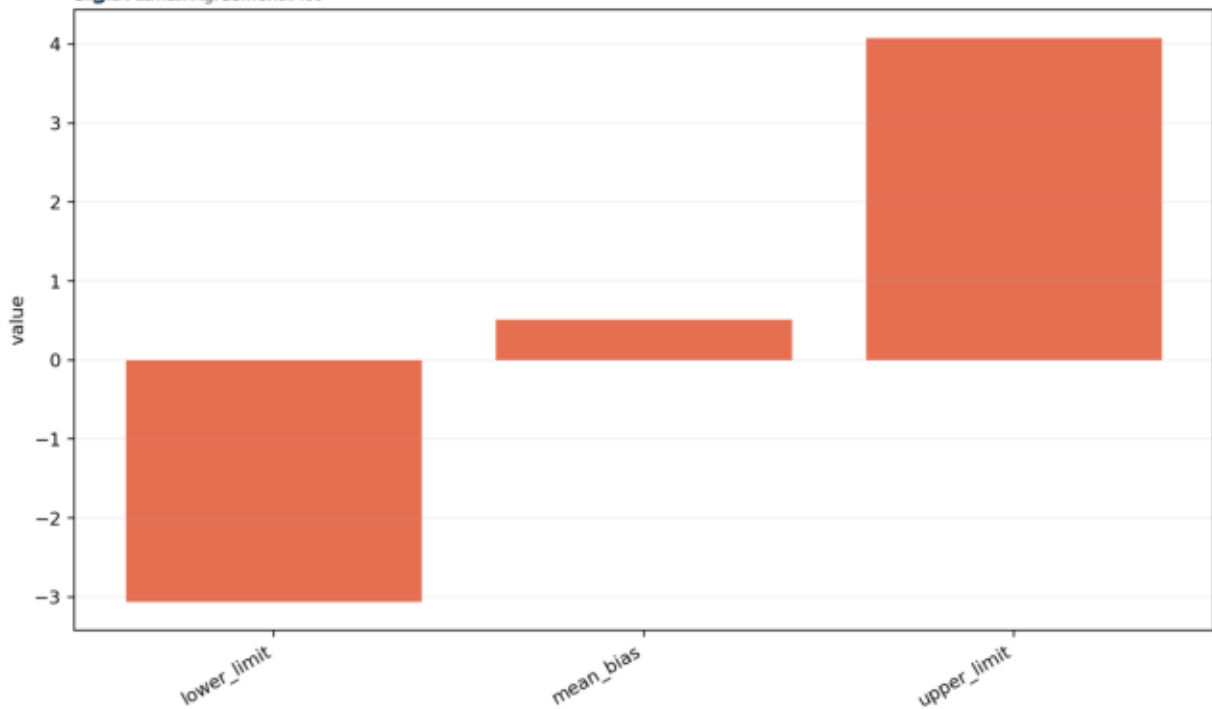
Primary Metrics



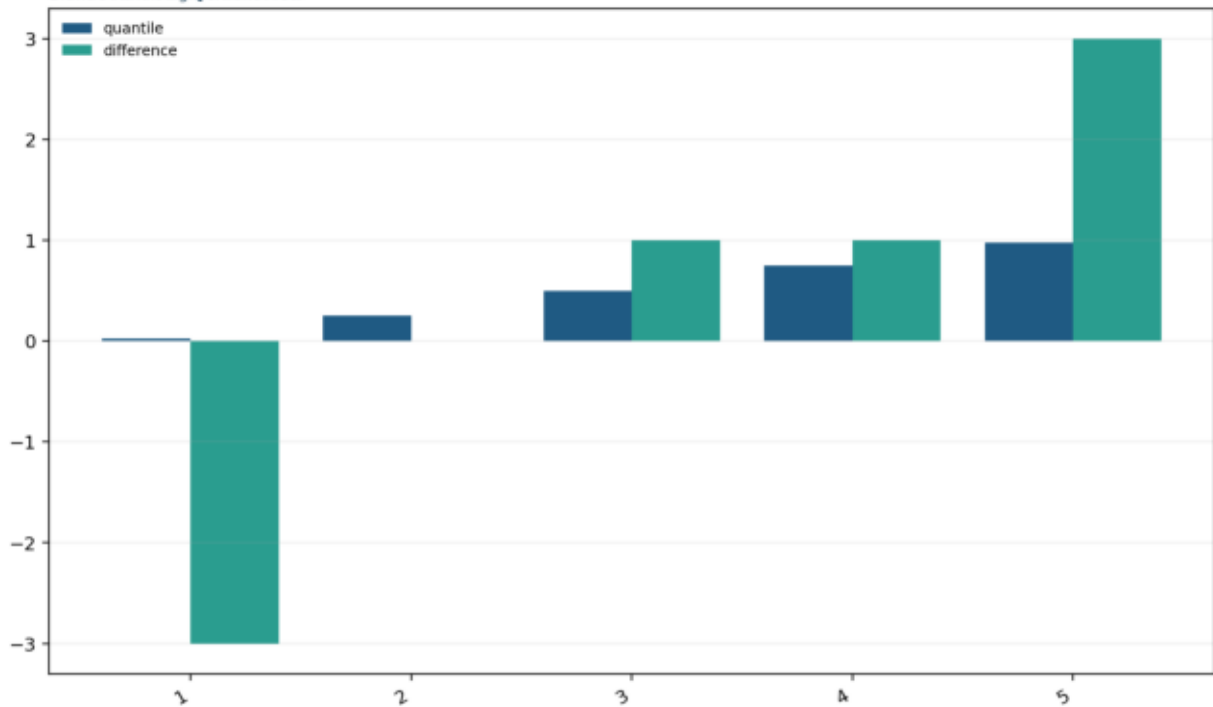
Paired Agreement Data



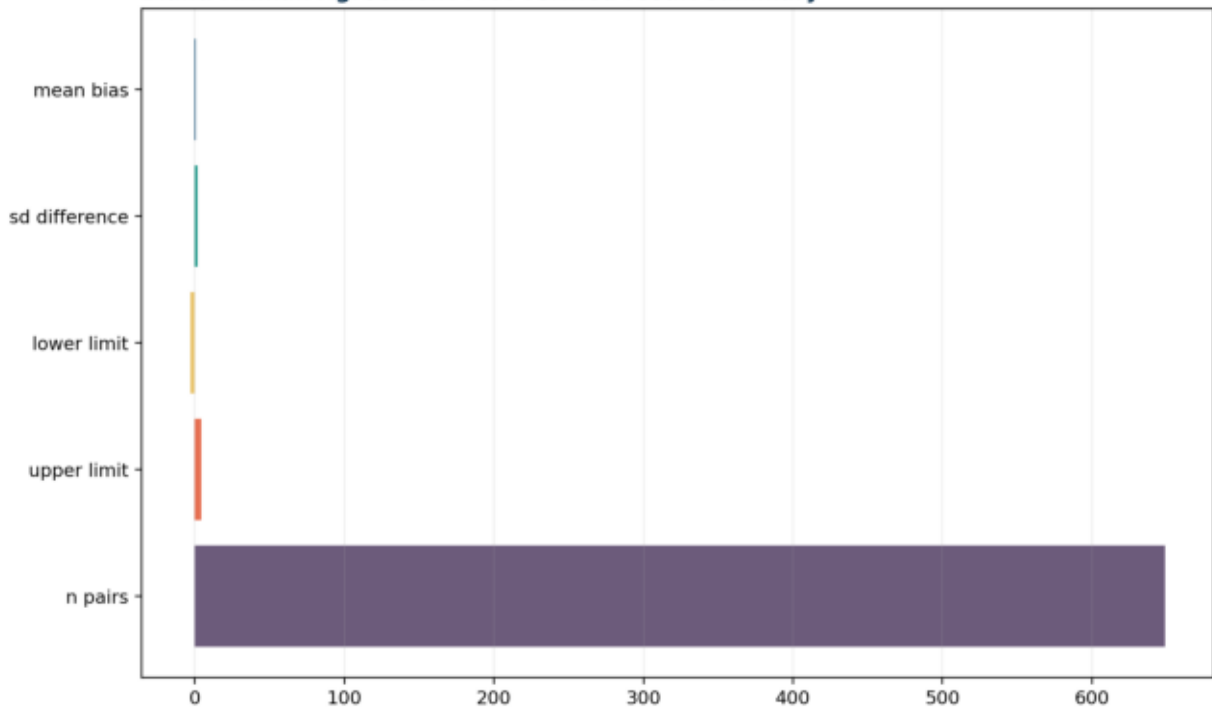
Agreement Limits Plot



Difference Quantiles



Bland-Altman Agreement Plot verified result summary



Primary Metrics

metric	value
mean_bias	0.506934
sd_difference	1.82076
lower_limit	-3.06175
upper_limit	4.07562
n_pairs	649

Paired Agreement Data

G1	G3	pair_mean	difference
0	11	5.5	11
9	11	10	2
12	12	12	0
14	14	14	0
11	13	12	2
12	13	12.5	1
13	13	13	0
10	13	11.5	3
15	17	16	2
12	13	12.5	1
14	14	14	0
10	13	11.5	3
12	12	12	0
12	13	12.5	1
14	15	14.5	1
17	17	17	0
13	14	13.5	1
13	14	13.5	1
8	7	7.5	-1
12	12	12	0
12	14	13	2
11	12	11.5	1
12	14	13	2
10	10	10	0
10	10	10	0
10	12	11	2

Agreement Limits

line	value
lower_limit	-3.06175
mean_bias	0.506934
upper_limit	4.07562

Difference Quantiles

quantile	difference
0.025	-3
0.25	0
0.5	1
0.75	1
0.975	3