

Table 1 shows how each model scores under different operationalisations of viability aspects. They were derived from Hsieh et al.’s custom evaluation protocol and aim to provide a better comparison. Each value reflects the mean across all counterfactual results per model.

Table 1: Shows the mean result of each models’ result with respect to diversity, plausibility proximity and sparsity.

Model	Property Dimension	Diversity	Plausibility	Proximity	Sparsity
Casebased Generator	Activity	0.007850	1.000000	12.545000	9.345000
	Resource	0.006100	0.000000	15.710000	15.505000
Evolutionary: SBI-ES-OPC-SBM-FSR	Activity	0.375000	0.000000	15.250000	13.250000
	Resource	0.250000	0.000000	15.750000	15.750000
Random Generator	Activity	0.005000	0.000000	23.415000	21.160000
	Resource	0.193300	0.000000	24.185000	24.185000

The results show that diversity is the highest for the evolutionary algorithm in terms of activity traces and resource traces. The Random-Search Generator displays low diversity for activities generated and a higher diversity for the resource.

Only the Casebased-Search Generator reaches a maximum score of 1 for plausibility. All the other models are far below or 0.

In terms of proximity, the Casebased-Search Generator has the lowest activity proximity. The average distance is 12.55. The SBI-ES-OPC-SBM-FSR Generator takes the second place. Interestingly, the gap between the proximity for activities is larger than the gap between proximities in terms of resources.

Again, the Casebased-Search Generator has the lowest sparsity with 9.34 in terms of activity but only remains slightly better than SBI-ES-OPC-SBM-FSR Generator in terms of resources.