

Strategy Evaluation Results

Summary

Total Strategy Combinations	6
Total Test Cases	10000
Timestamp	2026-02-05 11:14:10

Strategy Performance

RULE_BASED_NLP + DIJKSTRA Path Finder

Pipeline Results

Accuracy	70.09% (7009/10000)
Avg Execution Time	19.07 ms
Min Execution Time	14.86 ms
Max Execution Time	72.60 ms

NLP Results

Inputs Processed	10000
Successfully Extracted	6723
Extraction Errors	3277
Avg Extraction Time	18.53 ms

Path Finder Results

Paths Computed	6723
Avg Computation Time	0.81 ms
Avg Path Length	9.33 stations

RULE_BASED NLP + DIJKSTRA_TEST Path Finder

Pipeline Results

Accuracy	70.09% (7009/10000)
Avg Execution Time	16.52 ms
Min Execution Time	14.75 ms
Max Execution Time	74.63 ms

NLP Results

Inputs Processed	10000
Successfully Extracted	6723
Extraction Errors	3277
Avg Extraction Time	16.05 ms

Path Finder Results

Paths Computed	6723
Avg Computation Time	0.70 ms
Avg Path Length	9.33 stations

RULE_TEST NLP + DIJKSTRA Path Finder

Pipeline Results

Accuracy	70.09% (7009/10000)
Avg Execution Time	16.37 ms
Min Execution Time	14.72 ms
Max Execution Time	31.88 ms

NLP Results

Inputs Processed	10000
Successfully Extracted	6723
Extraction Errors	3277
Avg Extraction Time	15.90 ms

Path Finder Results

Paths Computed	6723
Avg Computation Time	0.70 ms
Avg Path Length	9.33 stations

RULE_TEST NLP + DIJKSTRA_TEST Path Finder

Pipeline Results

Accuracy	70.09% (7009/10000)
Avg Execution Time	16.54 ms
Min Execution Time	14.71 ms
Max Execution Time	42.77 ms

NLP Results

Inputs Processed	10000
Successfully Extracted	6723
Extraction Errors	3277
Avg Extraction Time	16.07 ms

Path Finder Results

Paths Computed	6723
Avg Computation Time	0.71 ms
Avg Path Length	9.33 stations

HF_NER NLP + DIJKSTRA Path Finder

Pipeline Results

Accuracy	52.35% (5235/10000)
Avg Execution Time	25.42 ms
Min Execution Time	15.35 ms
Max Execution Time	2047.71 ms

NLP Results

Inputs Processed	10000
Successfully Extracted	2681
Extraction Errors	7319
Avg Extraction Time	25.11 ms

Path Finder Results

Paths Computed	2681
Avg Computation Time	1.14 ms
Avg Path Length	11.29 stations

HF_NER NLP + DIJKSTRA_TEST Path Finder

Pipeline Results

Accuracy	52.35% (5235/10000)
Avg Execution Time	20.43 ms
Min Execution Time	15.40 ms
Max Execution Time	42.58 ms

NLP Results

Inputs Processed	10000
Successfully Extracted	2681
Extraction Errors	7319
Avg Extraction Time	20.15 ms

Path Finder Results

Paths Computed	2681
Avg Computation Time	1.04 ms
Avg Path Length	11.29 stations

Results Per Strategy

NLP Results (Global)

The NLP component extracts departure and arrival stations from user input.

Total Inputs Processed	60000
Successfully Extracted	32254
Extraction Errors	27746
Avg Extraction Time	18.63 ms

Path Finder Results (Global)

The path finder computes the shortest route between two stations.

Total Paths Computed	32254
Avg Path Computation Time	0.79 ms
Avg Path Length	9.66 stations

Pipeline Results

End-to-end pipeline performance combining NLP and path finding.

Total Pipeline Executions	60000
Avg Total Time	19.06 ms
Min Total Time	14.71 ms
Max Total Time	2047.71 ms