

Performance Comparison Summary

Processing Method	Dataset Size	Processing Time (s)	Throughput (rec/sec)	Memory Usage	Scalability	Results
Sequential	5,000	0.01	500000	Minimal	Poor	✓
Parallel (2 cores)	5,000	0.04	125000	Low	Limited	✓
MapReduce	10,000	-	-	Medium	Good	✓
Spark Distributed	19,775	3.03	6531	High	Excellent	✓
Kinesis Streaming	102	31.44	3.24	Low	Real-time	✓