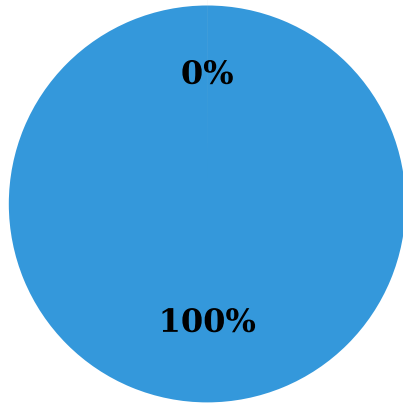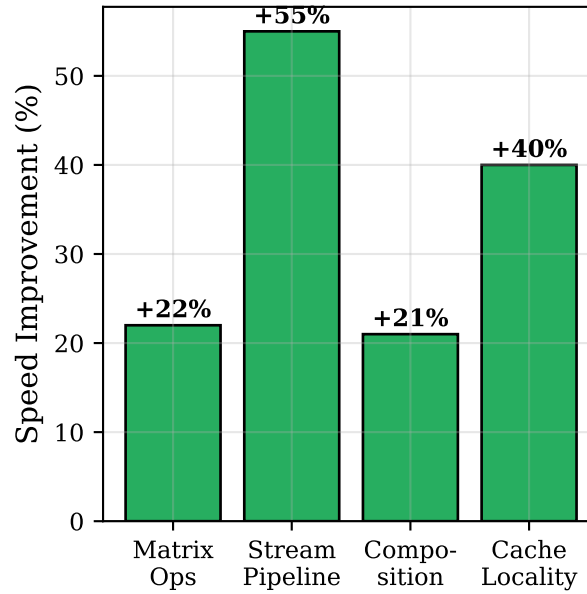# ATOMiK vs SCORE: Benchmark Summary Dashboard
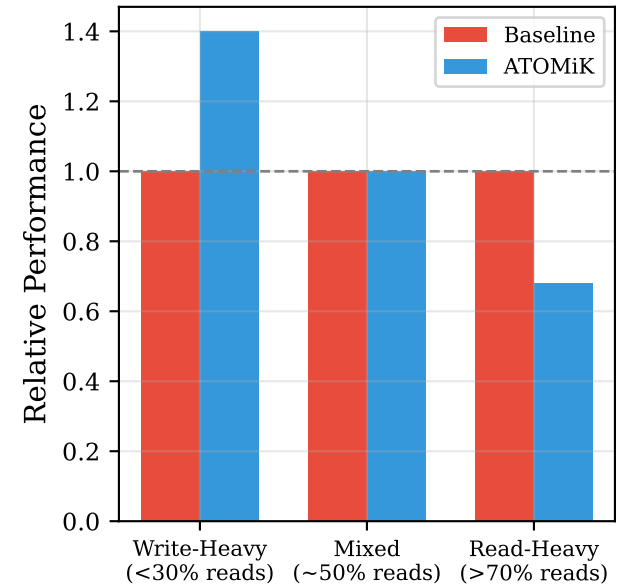

(a) Memory Traffic Reduction
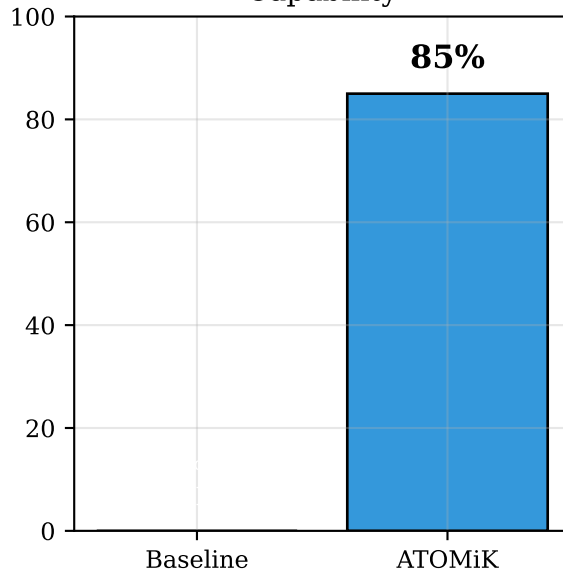
0%

100%

(b) Execution Speed Gains (Write-Heavy)

+55%

+40%

+22%

+21%

Speed Improvement (%)

Matrix Ops | Stream Pipeline | Composition | Cache Locality

(c) Workload Trade-offs

Baseline | ATOMiK

Relative Performance

Write-Heavy (<30% reads) | Mixed (~50% reads) | Read-Heavy (>70% reads)

(d) Parallelization Capability

85%

Parallel Efficiency (%)

Baseline | ATOMiK

(e) Statistical Significance

Not Significant

25%

75%

Significant (p<0.05)

(f) Summary

Key Results Summary

Memory Traffic: 95-100% ↓

Speed (writes): +22-55%

Speed (reads): -32%

Parallel Eff.: 85% vs 0%

Measurements: 360 total

Tests Passing: 45/45