Scheduling Algorithms

Philip Nelson

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Hypothesis

Different scheduling algorithms will produce better results in terms of Efficiency, Latency, and Response Time

Process

Different scheduling algorithms were implemented and tested on a simulation framework that had each algorithm choose jobs to be scheduled from randomly created tasks.

Findings

Interestingly all algorithms were more efficient on a single core. As expected shortest job first was the most efficient on 4 cpus. Shortest job first also produced the lowest latency and fastest response time. Approximate shortest job first followed closely behind shorted job first.

Conclusion

I believe that the results would have been more varied if they were taken on larger sample sizes and across more tests. Despite this, we can see that shortest job first is the best algorithm and approximate shortest job is close 2nd.
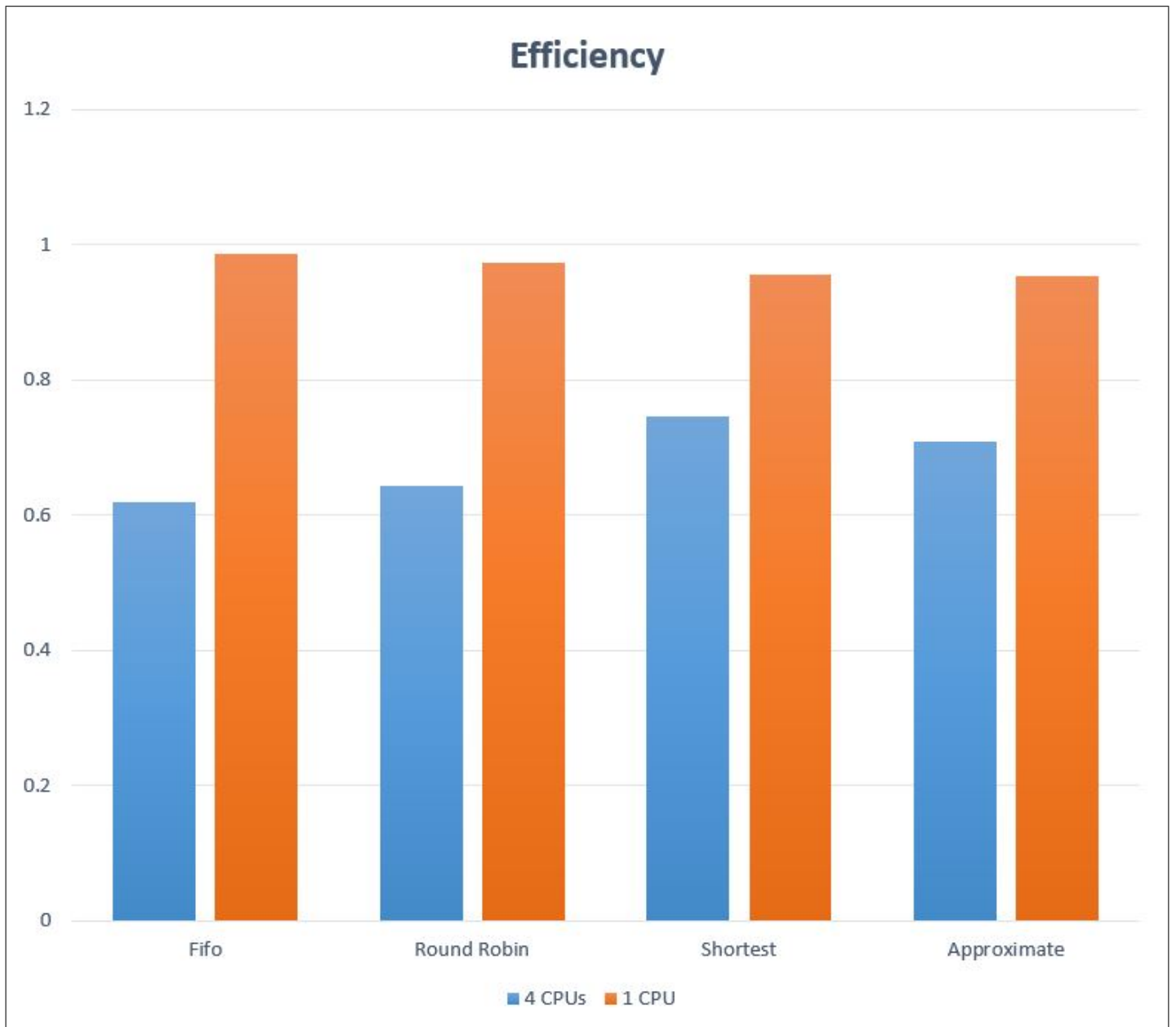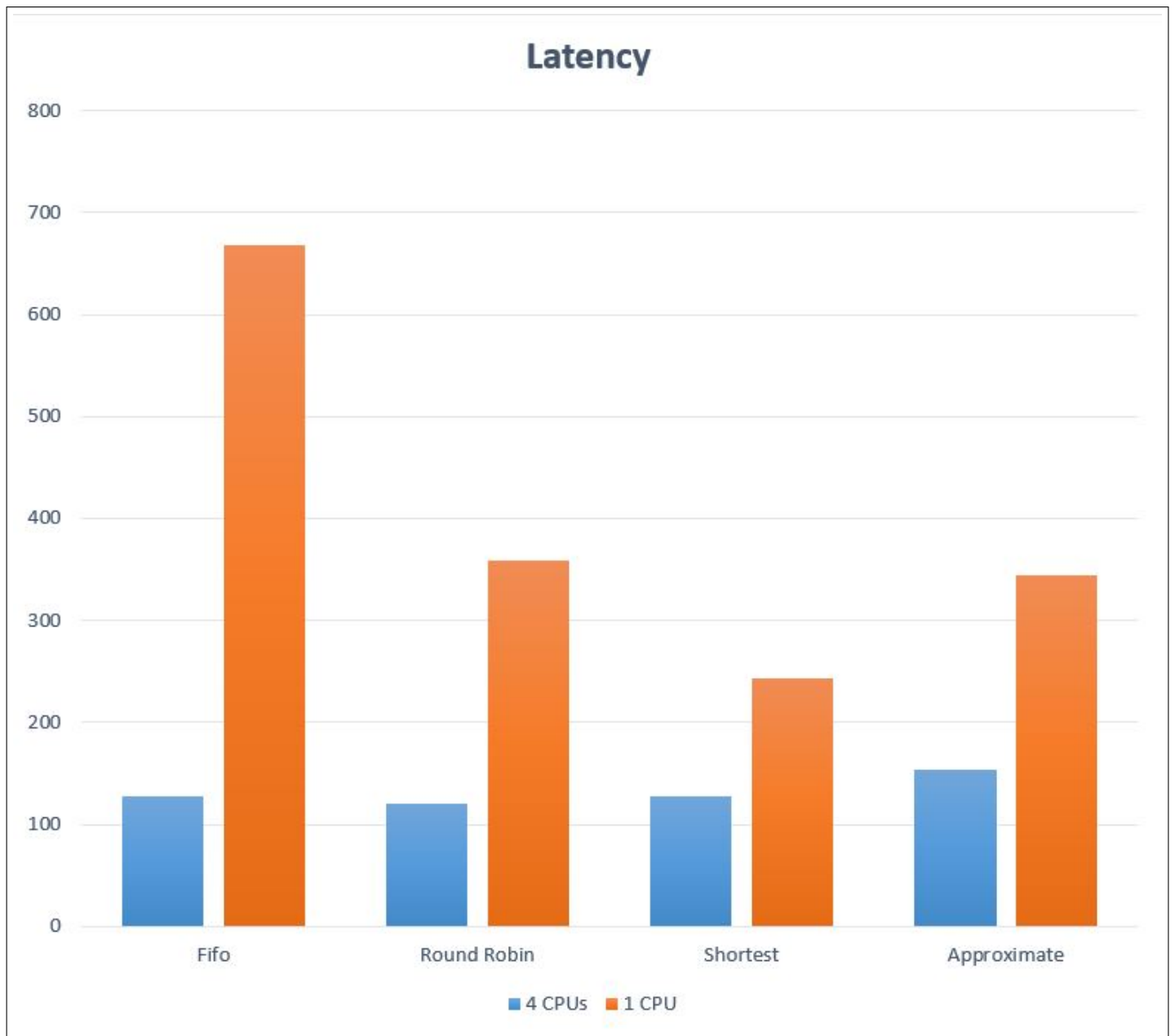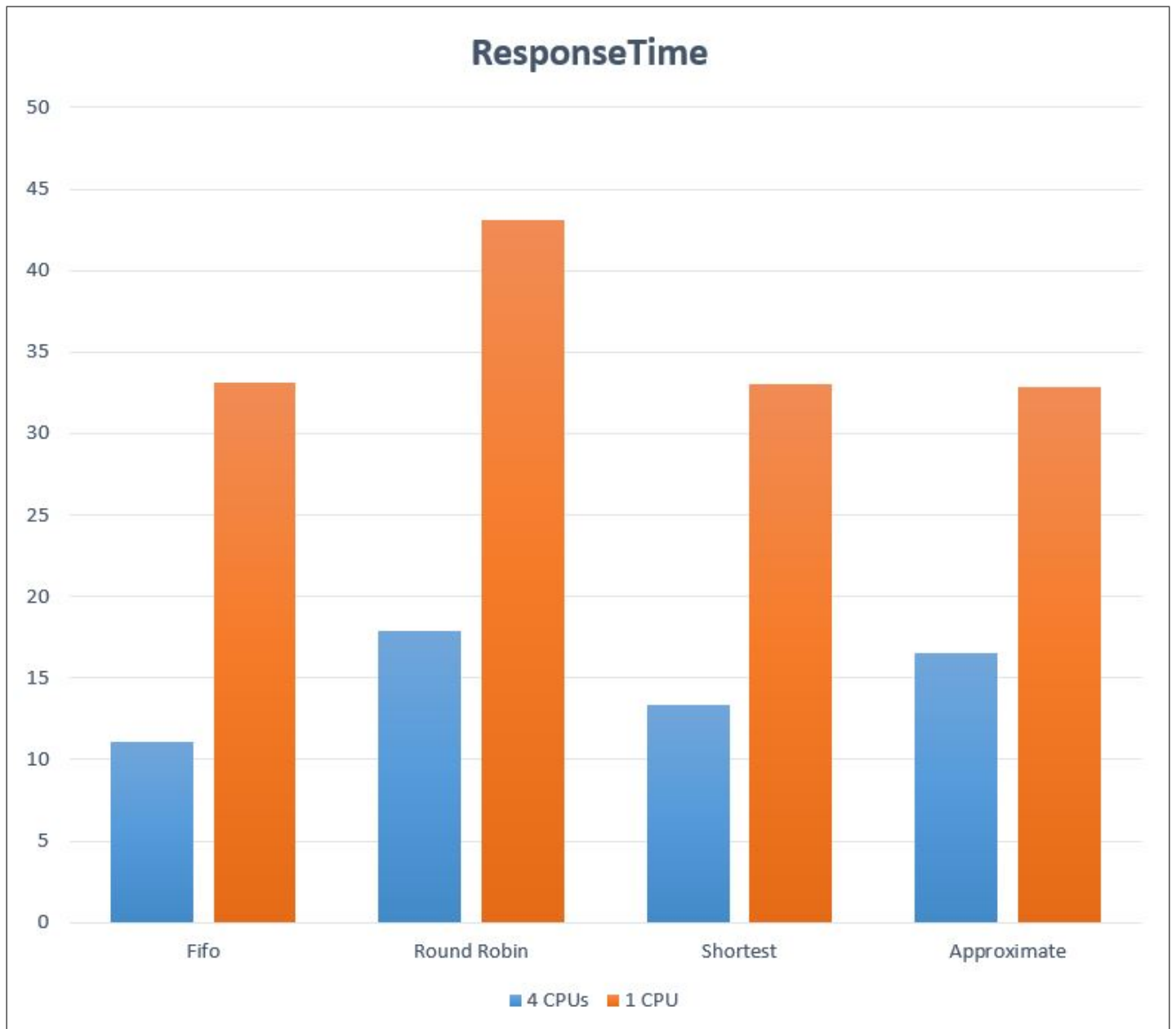
Data

Figure 1: Efficiency

Figure 2: Latency

Figure 3: Response Time