# Analysis

## p* estimates
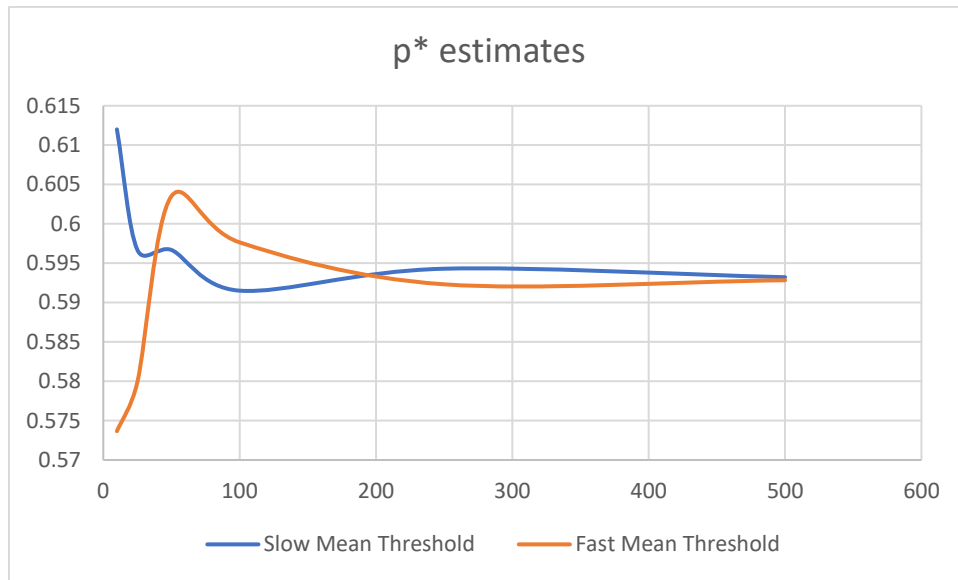


- P* estimate result discussion:

We can see in the graph that the p* values for fast and slow are near 0.58. As the size of the grid increased the p* for both near 0.595. It feels that the there was a spike at N=100 but the spike is due to the scale of the y axis, thus exaggerating the effect.

## Running Time

- Running Time result discussion:
  We can see that the WeightedQuickUnionUF is a better Union Find API is better than the QuickUnionUF. Both the graphs grow as N increases. We can see that after around N=300, the QuickUnionUF takes a much more time to complete the percolation hence QuickUnionUF is ineffective for higher values of N.