# Graph: Mean Lap Times

## Mean Lap Times for Algorithm Variants
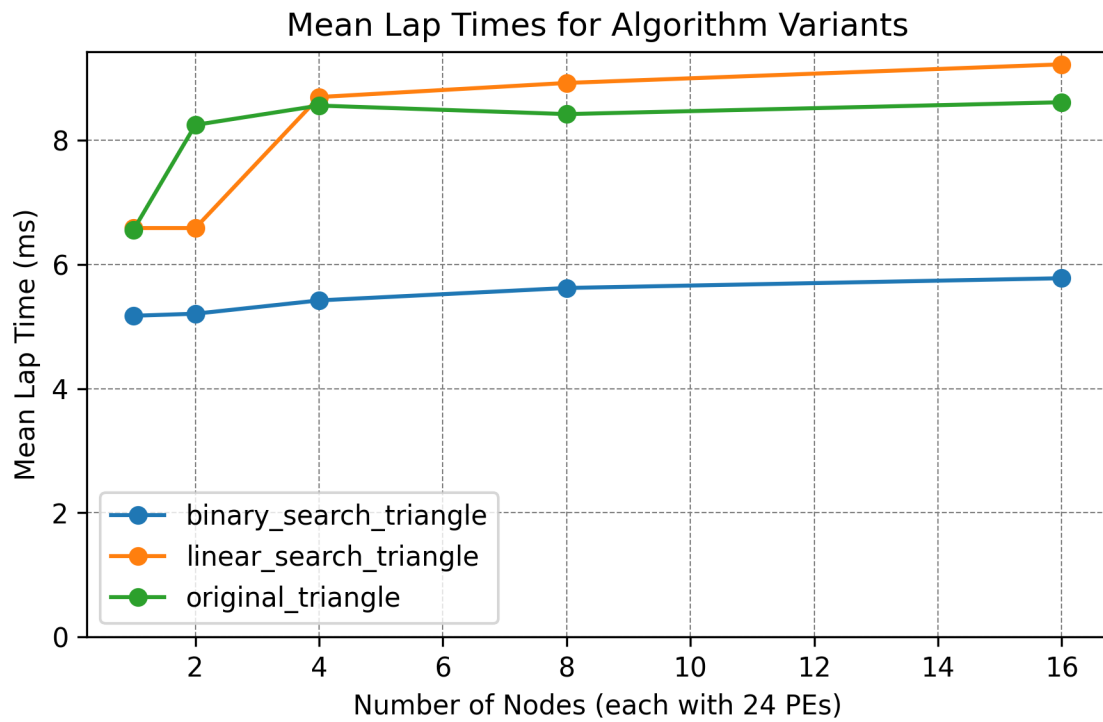


## Two-Sample T-Tests

Null Hypothesis: There is no significant difference in mean lap times between 'binary_search_triangle' and 'linear_search_triangle' variants.

| Nodes | t-statistic | p-value | Conclusion |
| --- | --- | --- | --- |
| 1 | -1.29e+02 | 1.06e-42 | Significant |
| 2 | -1.26e+02 | 2.17e-42 | Significant |
| 4 | -2.11e+01 | 2.59e-19 | Significant |
| 8 | -2.01e+01 | 6.39e-19 | Significant |
| 16 | -2.20e+01 | 5.04e-20 | Significant |

Null Hypothesis: There is no significant difference in mean lap times between 'binary_search_triangle' and 'original_triangle' variants.

| Nodes | t-statistic | p-value | Conclusion |
| --- | --- | --- | --- |
| 1 | -1.03e+01 | 3.57e-11 | Significant |
| 2 | -2.62e+01 | 9.85e-22 | Significant |

| | | | |
|---|---|---|---|
| 4 | -1.41e+01 | 1.47e-14 | Significant |
| 8 | -5.81e+01 | 2.82e-40 | Significant |
| 16 | -2.36e+01 | 3.58e-21 | Significant |

Null Hypothesis: There is no significant difference in mean lap times between 'linear_search_triangle' and 'original_triangle' variants.

| Nodes | t-statistic | p-value | Conclusion |
|---|---|---|---|
| 1 | 2.17e-01 | 8.30e-01 | Not Significant |
| 2 | -1.42e+01 | 9.30e-15 | Significant |
| 4 | 5.07e-01 | 6.14e-01 | Not Significant |
| 8 | 2.98e+00 | 5.41e-03 | Significant |
| 16 | 3.12e+00 | 2.87e-03 | Significant |