



Network Performance Analytics



Simple Summary

This page shows how the AI load-balancing system performed over time. It compares different algorithms like **Baseline**, **Heuristic**, and **K-Means** in terms of fairness (Jain Index), total users served (Throughput), and tower usage (Utilization).

- **Higher Jain Index** → Fairer load across towers.
- **Higher Throughput** → More users successfully connected.
- **Stable Utilization** → Efficient use of network capacity.

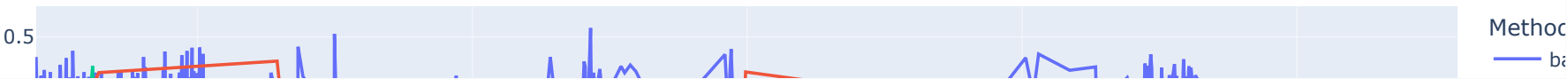
The goal: **AI distributes users evenly** and keeps the network stable even when demand changes.

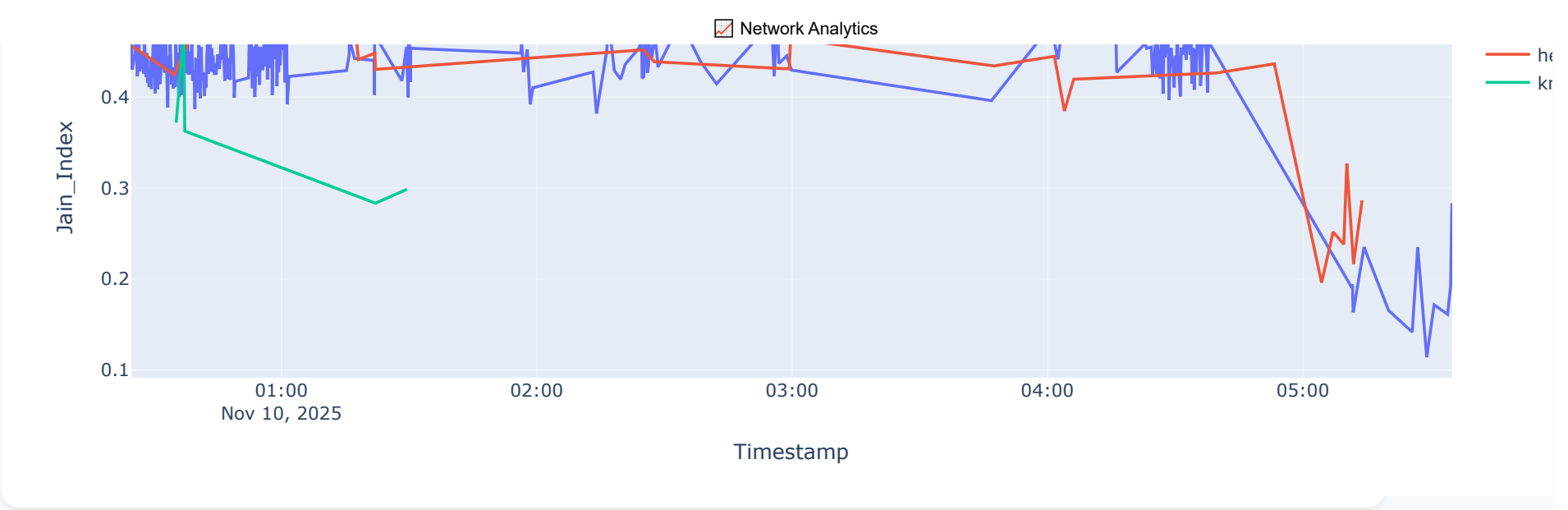


Average Performance Summary

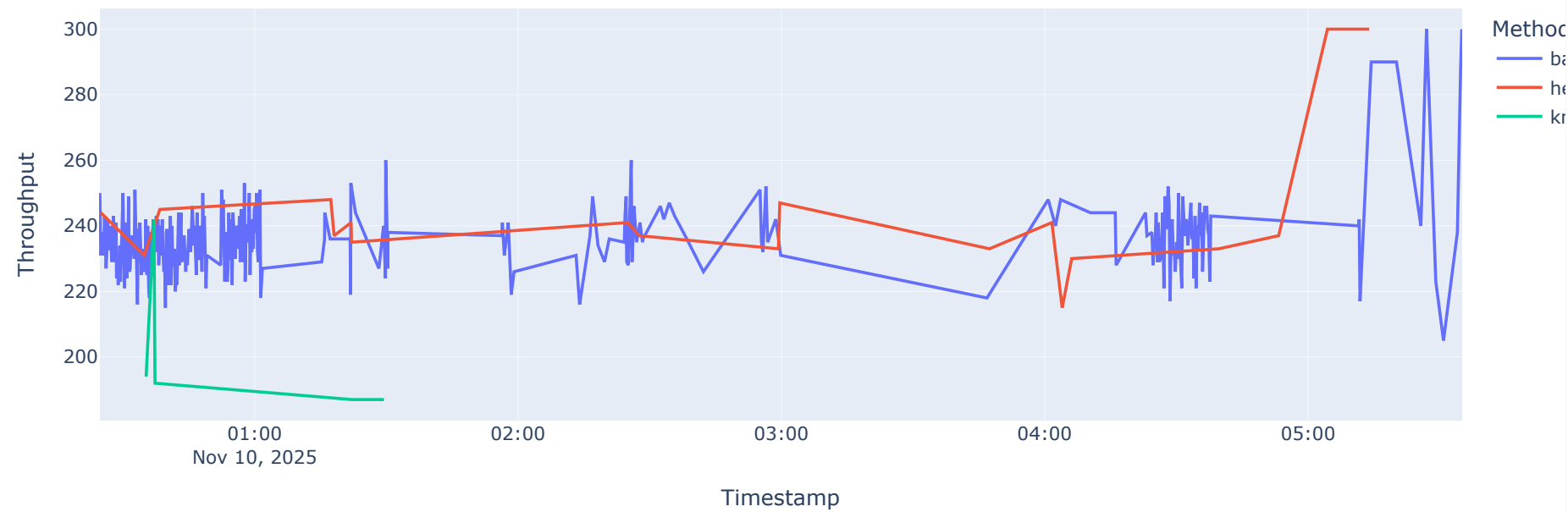
| Method | Jain Index | Throughput | Avg Utilization |
|-----------|------------|------------|-----------------|
| baseline | 0.431 | 236.035 | 0.402 |
| heuristic | 0.391 | 253.391 | 0.354 |
| kmeans | 0.357 | 200.4 | 0.351 |

Fairness Over Time

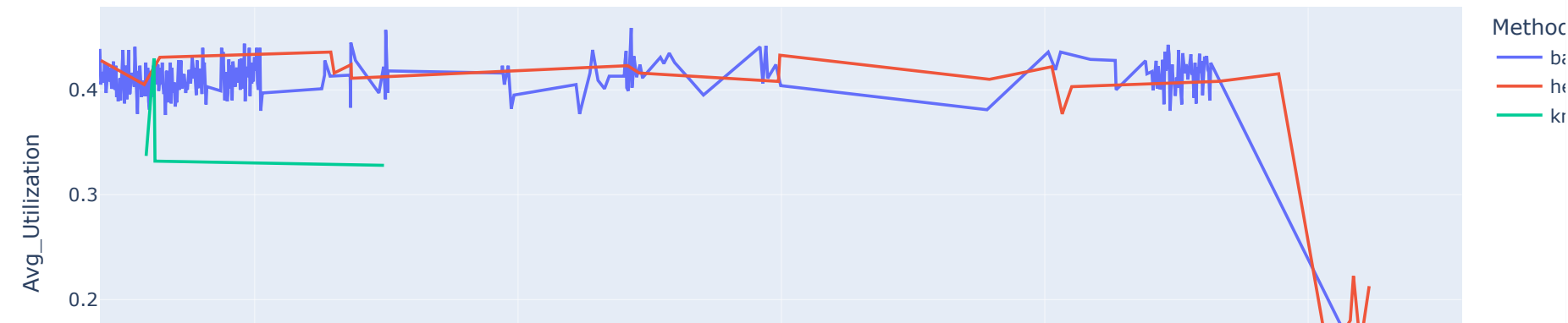


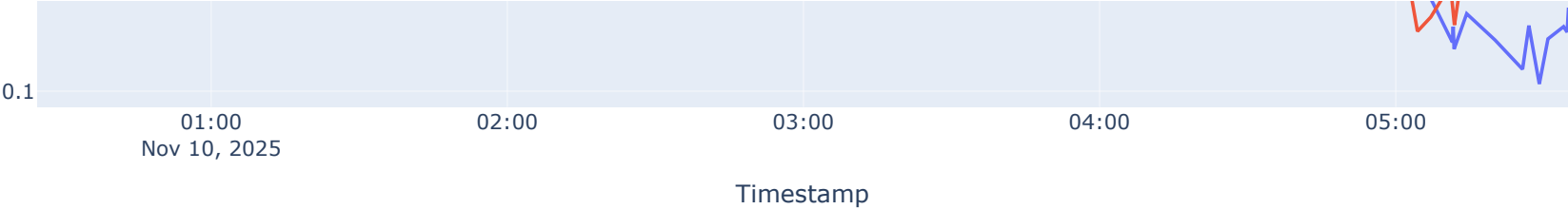


Throughput Over Time



Utilization Over Time





Quick Guide:

- **Fairness Over Time** → How evenly users were distributed between towers.
- **Throughput Over Time** → Total active users served across methods.
- **Utilization Over Time** → Efficiency of base station capacity.

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