



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

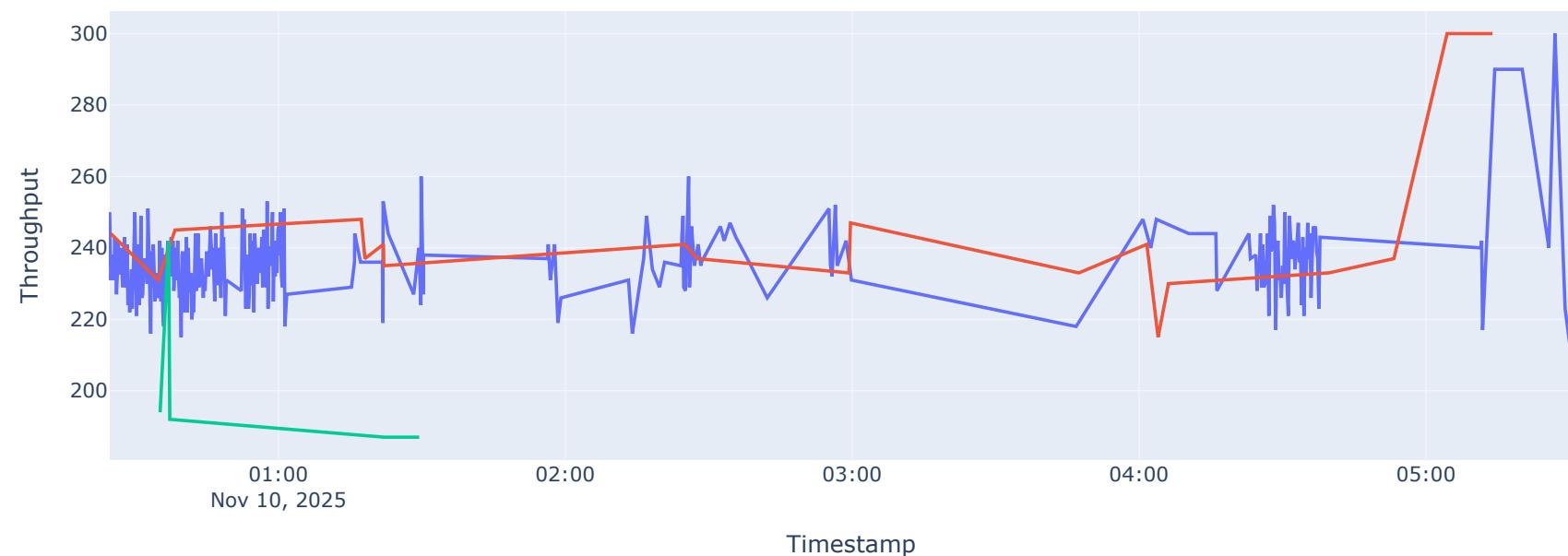
Fairness Over Time



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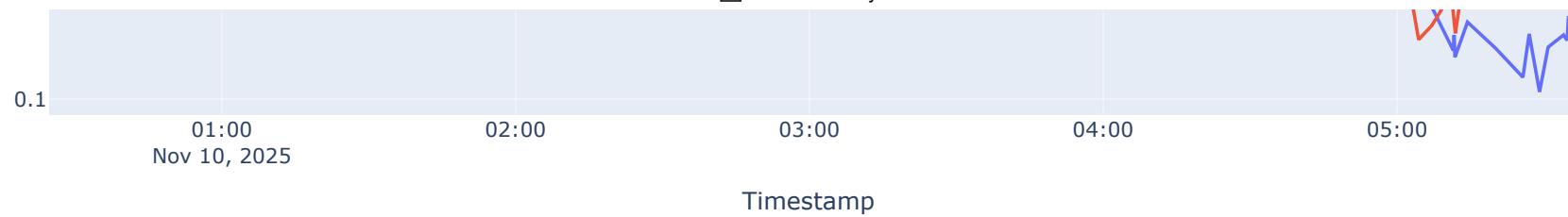


Throughput Over Time



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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