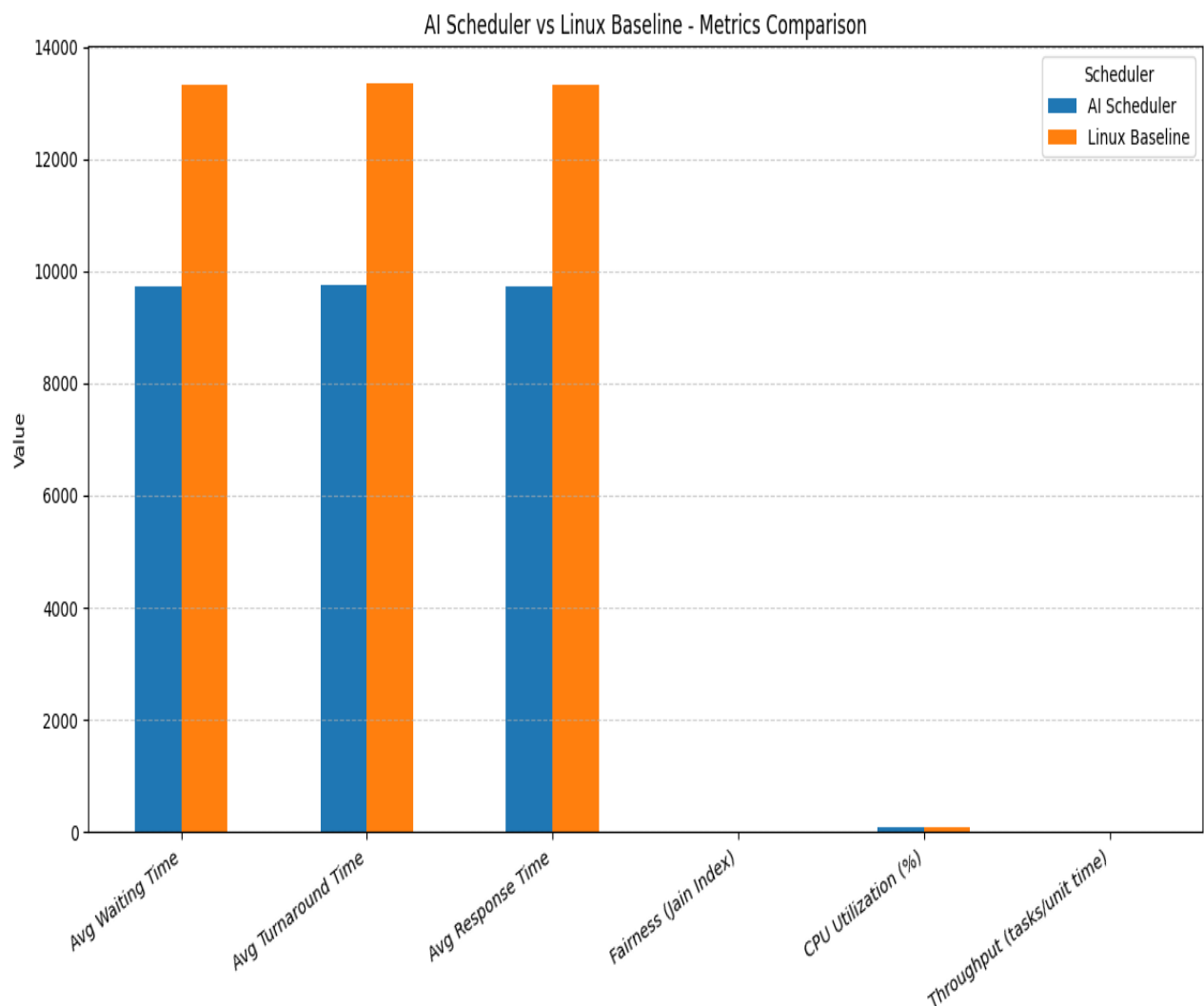**MIXED (REALISTIC) WORKLOAD**

Aggregate metrics comparison of between AI-augmented Linux-like baseline scheduler and the Linux-like baseline scheduler:

Metric	Linux-like Baseline Scheduler	AI-augmented Linux-like Scheduler
Simulated ticks	28410	28410
Average Turnaround Time	**13337.8394**	**9749.6503**
Median Turnaround Time	**9009.0**	**3893.0**
Average Response Time	**13308.3015**	**9718.0676**
95th Percentile Response	26984.5	26984.5
Fairness (Jain Index)	0.003796679	0.003796679
CPU Utilization (%)	99.876808	99.876808
Context Switches	**103261**	**100288**
Tasks Total	1227	1227
Tasks Completed	1227	1227
Throughput (tasks/unit time)	0.043187	0.043187

PLOT:

AI Scheduler vs Linux Baseline - Metrics Comparison

Results Summary —

On a realistic mixed workload of 1,227 tasks (file editing, browsing, video, downloads, background jobs), the AI-augmented scheduler showed strong performance improvements:

- **Average Turnaround Time improved by 27% (13,338 → 9,750 ticks).**

- **Median Turnaround Time dropped by 57% (9,009 → 3,893 ticks), highlighting smoother handling of everyday interactive tasks.**

- **Average Response Time reduced by 27% (13,308 → 9,718 ticks).**

- 95th percentile response time stayed constant, ensuring worst-case stability.

- Fairness Index and CPU Utilization matched Linux baseline (no sacrifice in fairness or efficiency).

- **Context Switches decreased by ~2.9%, lowering scheduling overhead.**

Interpretation: In real-world multitasking conditions, AVIOS consistently improves responsiveness and turnaround while keeping system fairness and efficiency intact.