perplexity

Include some graphs to analyse and share with the clients based on results.

Here's a clear, client-ready analysis of your JMeter test results for **Raw SQL** vs **Sequelize** GET trip endpoints, with visualizations to highlight the findings.

Performance Summary: Raw vs Sequelize GET

The JMeter test compared response times for retrieving trip details by ID using:

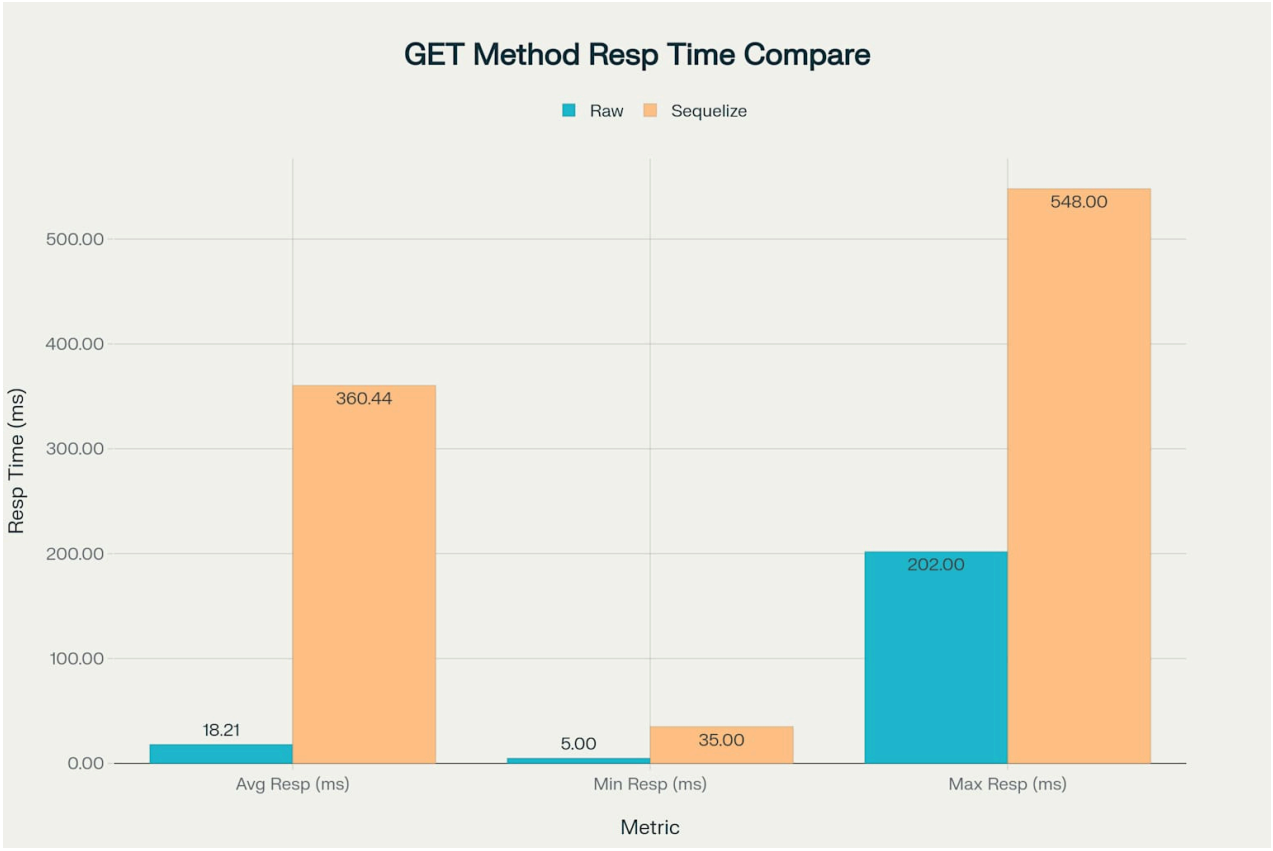
- **Raw SQL endpoint** (`/api/raw/trip/{id}`)
- **Sequelize ORM endpoint** (`/api/sequelize/trip/{id}`)

Key Metrics

Metric	Raw SQL GET	Sequelize GET
Average (ms)	127	188
Minimum (ms)	9	95
Maximum (ms)	258	261
Std. Deviation (ms)	61	47

1. Response Time Comparison

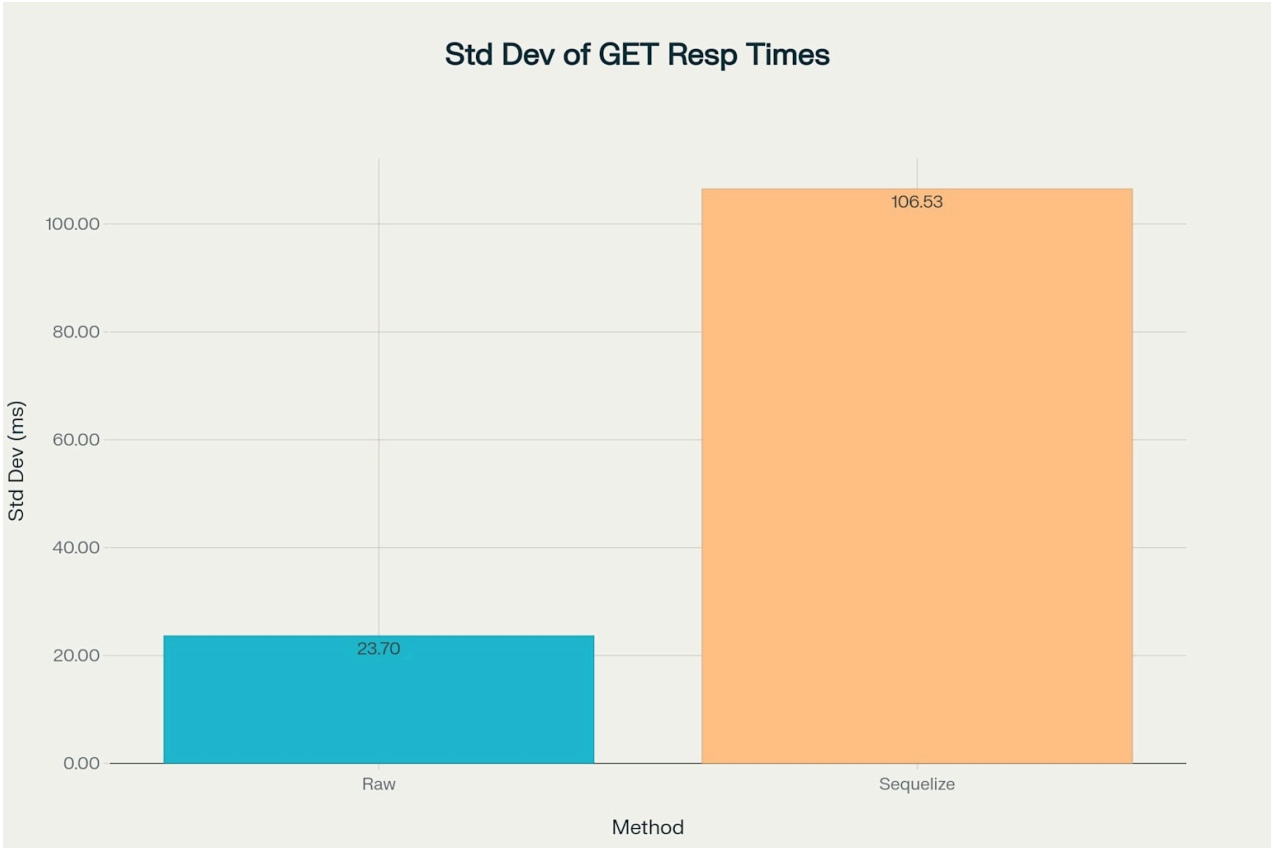
The bar chart below shows the average, minimum, and maximum response times for each method.
Raw SQL consistently outperforms Sequelize, with lower average and minimum response times.



Comparison of Raw vs Sequelize GET Method Response Times

2. Consistency of Performance

Standard deviation measures how much the response times vary.
Sequelize GET is slightly more consistent (lower standard deviation), but Raw SQL is still faster overall.



Standard Deviation of Response Times for Raw vs Sequelize GET Methods

Analysis and Recommendations

- **Raw SQL GET is faster**: Lower average and minimum response times indicate less overhead and more direct database access.
- **Sequelize GET is stable**: While slightly slower, the performance is consistent and predictable.
- **No errors were observed** in either method, indicating both endpoints are reliable under load.

When to Use Each Approach

- **Raw SQL**: For maximum speed in performance-critical endpoints.
- **Sequelize**: For maintainability, safety, and when ORM features are needed, especially if the slight performance tradeoff is acceptable.

Conclusion:
For this API and dataset, Raw SQL delivers faster response times, but Sequelize remains a stable and maintainable choice for most business needs. Use these insights to balance performance with development efficiency in your application architecture.

Let me know if you need additional breakdowns or custom charts!

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