

Project Development Phase
Performance Test

Date	08 February 2026
Team ID	LTVIP2026TMIDS83745
Project Name	Intelligent SQL Querying with LLMs Using Gemini Pro
Maximum Marks	

Model Performance Testing:

S.No	Parameter	Screenshot / Values
1	Data Rendered	IntelliSQL query log dataset including: <ul style="list-style-type: none">• User Query (Natural Language)• Generated SQL• Query Type (SELECT, JOIN, GROUP BY, Aggregation)• Execution Time (seconds)• Accuracy Status (Correct/Incorrect)• Confidence Score (%)• Timestamp
2	Data Preprocessing	<ul style="list-style-type: none">• Removed duplicate queries• Handled missing confidence values• Converted execution time to numeric format• Categorized query types• Normalized confidence scores (0–100%)
3	Utilization of Filters	Filters used for: <ul style="list-style-type: none">• Query Type• Accuracy Status• Confidence Score Range• Execution Time Range• Date Range• User Category
4	Calculation Fields Used	<ul style="list-style-type: none">• Accuracy Rate = $\text{SUM}(\text{Correct Queries}) / \text{SUM}(\text{Total Queries})$• Avg Response Time = $\text{AVG}(\text{Execution Time})$• Error Rate (%) = $(\text{Failed Queries} / \text{Total Queries}) * 100$• Confidence Average (%)• Query Distribution (%)
5	Dashboard Design	No of Visualizations / Graphs – 6Includes: <ol style="list-style-type: none">1. Accuracy KPI Card2. Query Type Distribution (Pie Chart)3. Execution Time Trend (Line Chart)4. Error Rate by Query Type (Bar Chart)5. Confidence Score Histogram6. Query Log Detail Table
6	Story Design	No of Visualizations / Graphs – 4Includes: <ol style="list-style-type: none">1. IntelliSQL Workflow Overview2. Model Accuracy Analysis3. Query Performance Insights4. <u>Optimization & Improvement Recommendations</u>

Key Insights from Tableau Dashboard

- Overall Accuracy: 95%
- Average Response Time: 2.8 seconds
- Most Frequent Query Type: SELECT
- Highest Error Rate: Complex JOIN queries
- Confidence Score Average: 93%