

Project Development Phase
Performance Test

Date	08 February 2026
Team ID	LTVIP2026TMIDS81581
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: • 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	• 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: • Query Type • Accuracy Status • Confidence Score Range • Execution Time Range • Date Range • User Category
4	Calculation Fields Used	• 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 – 6 Includes: 1. Accuracy KPI Card 2. Query Type Distribution (Pie Chart) 3. Execution Time Trend (Line Chart) 4. Error Rate by Query Type (Bar Chart) 5. Confidence Score Histogram 6. Query Log Detail Table
6	Story Design	No of Visualizations / Graphs – 4 Includes: 1. IntelliSQL Workflow Overview 2. Model Accuracy Analysis 3. Query Performance Insights 4. <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%