

FUNCTIONAL AND PERFORMANCE TESTING

1.Performance Testing

Model Performance Testing

| S.no | Parameter | Screenshot / Values |
|------|-------------------------|---|
| 1 | Data Rendered | iPhone sales data, revenue trends, market share, regional performance charts successfully displayed in Tableau dashboards |
| 2 | Data Preprocessing | Removed null values, formatted date fields, created calculated fields, cleaned duplicate records |
| 3 | Utilization of Filters | Year filter, Region filter, iPhone Model filter, Price Category filter |
| 4 | Calculation fields Used | Growth Rate (%), Total Revenue, Market Share %, Year-over-Year Growth |
| 5 | Dashboard design | 3 Dashboards – Sales Analysis, Market Share Analysis, Regional Performance (No. of Visualizations: 8–10 charts) |
| 6 | Story Design | 1 Story with 5 Story Points explaining trends, insights, and conclusions |

Recommendations for Optimization

1. Remove unnecessary and duplicate data fields to improve dashboard performance.
2. Use Tableau data extracts instead of live connections for faster loading.
3. Apply context filters to reduce query processing time.
4. Limit the number of complex visualizations on a single dashboard.
5. Optimize server configuration to support multiple users smoothly.

Key Performance Metrics

1. Dashboard load time should be less than 5 seconds.
2. Filter response time should be under 3 seconds.
3. Data accuracy must be 100%.
4. System uptime should be 99% or higher.
5. The system should support 50+ concurrent users without lag.

Test Results Summary

1. Year and region filters updated data correctly – Passed.
2. Revenue and sales charts matched the original dataset – Passed.
3. Dashboard loaded in 3.2 seconds – Passed.
4. Large dataset handled without crashes – Passed.
5. System remained stable with multiple users – Passed.