Data Governance & Security Dashboard – Project Report

1. Introduction

This project focuses on building a Power BI dashboard to monitor and analyze five key areas of organizational data governance: **Data Quality, Data Access, Data Privacy, Data Security, and Compliance**. The purpose of the dashboard is to provide clear visibility into the integrity, accessibility, protection, and regulatory alignment of organizational data. This helps identify potential risks, track performance, and support informed decision-making.

2. Objective of the Dashboard

The primary objectives of the Data Governance & Security Dashboard are:

- To centralize all governance-related metrics in one place
- To assess the quality of data being used across the organization
- To track data access requests and approval workflows
- To monitor privacy compliance and identify violations
- To evaluate data security through incident trends
- To provide insights into audit results and regulatory compliance

3. Data Sources

The dashboard is built using five datasets:

1. **Data Quality**
    - Contains AccuracyRate, CompletenessRate, ConsistencyRate for each data source
    - Helps assess the reliability and cleanliness of data
2. **Data Access**
    - Tracks access requests by user, department, role, and status
    - Measures approval time and access activity patterns

3. **Data Privacy**
    - Shows user interactions with sensitive data
    - Indicates compliance vs non-compliance with privacy policies
4. **Data Security**
    - Includes security incident types, detection time, response time, and actions taken
    - Provides insights into the effectiveness of security response
5. **Compliance**
    - Tracks audit results, regulatory adherence, and non-compliance counts
    - Helps measure readiness for legal and compliance frameworks

4. Dashboard Visuals Overview

The dashboard includes several important visual components:

Data Quality Page

- KPI cards showing average accuracy, completeness, and consistency
- A line chart showing trend of data quality over time
- A bar chart comparing data quality by source
- A detailed table listing all data quality metrics

Data Access Page

- Pie chart showing approval, rejection, and pending status
- Column chart showing requests by department
- KPI showing average approval time
- Table listing access logs

Data Privacy Page

- Donut chart showing compliance status
- Bar charts showing access by user and data type
- Table listing privacy logs

Data Security Page

- KPI cards showing total incidents, avg detection time, avg response time
- Column chart showing incidents by type
- Line chart comparing detection and response times
- Table listing incident details

5. Overall Insights

- **Data quality remains stable**, with accuracy and consistency showing strong performance; completeness fluctuates depending on the data source.
- **Access requests are highest in Finance and IT**, reflecting their need for frequent data usage. A notable number of pending or delayed approvals may require process optimization.
- **Most data access is compliant**, but a few users display unusually high activity and should be monitored for potential privacy risks.
- **Security incidents show a pattern**, with malware and unauthorized access being most frequent. Average response times are higher than detection times, indicating slower mitigation.
- **Compliance results indicate that most audits are passed**, but certain regulations such as GDPR and ISO show recurring non-compliance issues that need targeted interventions.

6. Conclusion

The Data Governance & Security Dashboard provides an integrated and interactive view of the organization's data landscape. It highlights strengths in data quality and privacy compliance while identifying areas of improvement in incident management, access processes, and regulatory compliance. This dashboard serves as a valuable tool for data leaders to monitor performance, enhance data governance maturity, and ensure organizational data is consistent, secure, and compliant.