System Architecture – Project Beta

The architecture of Project Beta is designed to support scalable analytics and automated reporting.

1. Data Ingestion Layer:

- Pulls data from internal databases, APIs, and external sources.

- Performs validation and schema enforcement.

2. Processing Layer:

- Handles transformations, cleaning, and feature engineering.

- Includes batch and real■time processing components.

3. Model Layer:

- Hosts machine learning models used for predictive insights.

- Supports versioning and model performance monitoring.

4. Storage Layer:

- Data Lake for raw data.

- Feature Store for engineered features.

- Analytics DB for aggregated outputs.

5. API Layer:

- Exposes processed data and model outputs through REST APIs.

6. Frontend Layer:

- Web-based dashboard for visualization and insights.