

Project Design Phase-II Technology Stack (Architecture & Stack)

Date	17 May 2023
Team ID	NM2023TMID01225
Project Name	Empowering the Future: A Literacy Rate Analysis for a Better Tomorrow

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

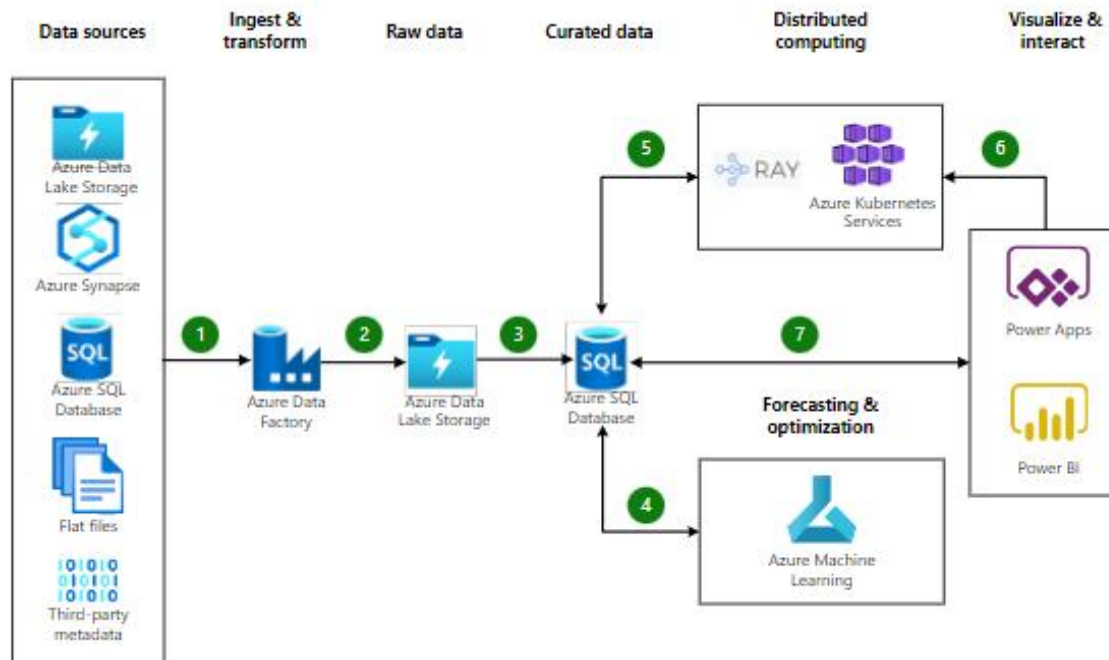


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Handles the presentation and interaction	HTML, CSS, JavaScript, UI Framework
2.	Application Logic-1	Business logic component 1	Python
3.	Application Logic-2	Business logic component 2	Python
4.	Application Logic-3	Business logic component 3	Python
5.	Database	Stores and manages the data	MySQL

6.	Cloud Database	Cloud-based database for scalability and flexibility	Cloud database service (AWS)
7.	File Storage	Stores and manages file data	Cloud storage service (AWS S3, Google Cloud Storage)
8.	External API-1	Integration with external API 1	API documentation (RESTful API)
9.	External API-2	Integration with external API 2	API documentation (RESTful API)
10.	Machine Learning Model	Trains and applies ML algorithms	Machine learning framework (scikit-learn, TensorFlow)
11.	Infrastructure	Server or cloud infrastructure for hosting	On-premises server or cloud platform (AWS, Azure)

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Utilize open-source frameworks	Django, Flask (Python)
2.	Security Implementations	Implement robust security measures to protect the application and data	SSL/TLS, JWT
3.	Scalable Architecture	Design an architecture that can handle increasing load and user demands	Microservices, Kubernetes
4.	Availability	Ensure high availability of the application to minimize downtime	Load balancing, fault tolerance
5.	Performance	Optimize application performance for faster response times and efficient resource utilization	Caching, indexing, query optimization