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

Date	19 May 2023
Team ID	PBL-NT-GP-10545-1682762806
Project Name	Disecting the digital landscape:A Comprehensive analysis of social media

Technical Architecture:

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

Example:
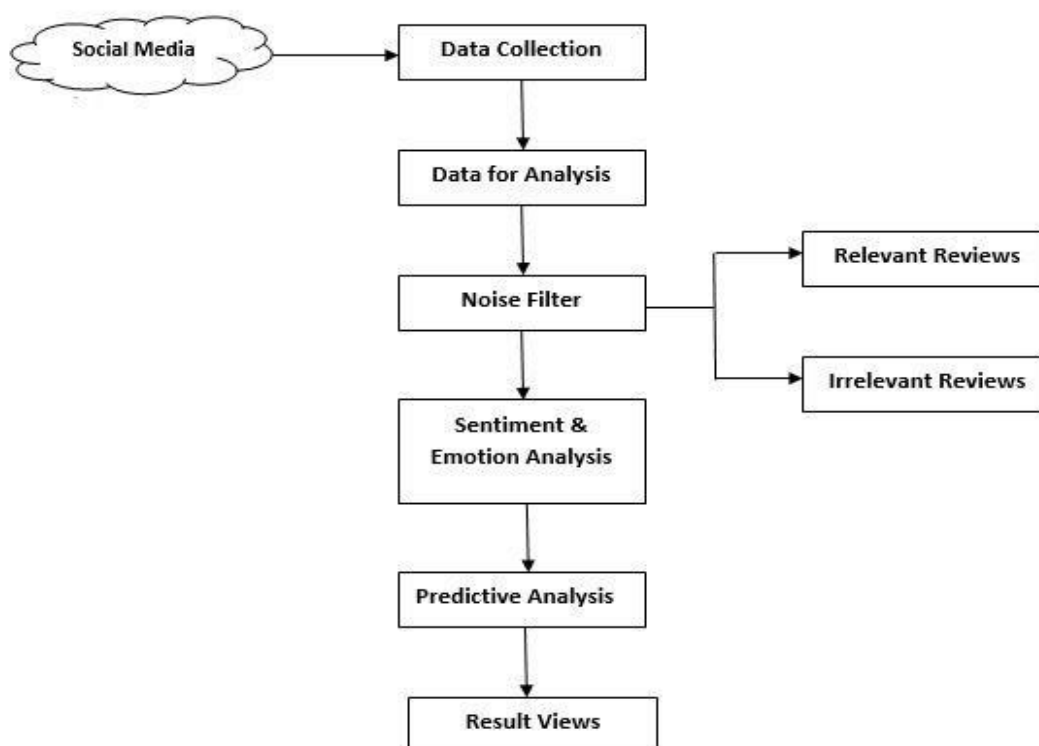
S.No	Component	Description	Technology
1.	Data Collection	Data involves gathering,processing and analysing social media data to extract meaningful insights.Platform offers diverse data sources each with its own unique characteristics.Depending on the objectives,relevant platforms should be selected.	Machine learning,data visualization,APIs,Web Scraping,NLP etc.…
2.	Data for Analysis	Data involves examining and interpreting the collected data to gain valuable insighrs and inform decision-making.It involves cleaning the data,handling missing values .	NLP,APIs,Machine Learning and Deep Learning etc…

3.	Application Logic-2	Involves Design and Implementation	Hadoop or Apache Spark
4.	Application Logic-3	Set of processes,algorithm and workflow	Graph query(Cypher)
5.	Database	Handle Structured, Unstructured and Semi-Structured data	MySQL, NoSQL, Data Warehouses etc…
6.	Cloud Database	Efficiently Storing,Managing and Analyzing	IBM Db2,MySQL,,AWS Databases etc….
7.	File Storage	File storage requirements	IBM Block Storage or Other Storage Service or Local Filesystem
8.	External API-1	Purpose of External API used in the application	IBM Weather API, etc.
9.	External API-2	Purpose of External API used in the application	Aadhar API, etc.
10.	Machine Learning Model	Purpose of Machine Learning Model	Object Recognition Model, etc.
11.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration :	Local, Cloud Foundry, Kubernetes, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Providing Scalable,Customizable and Cost-Effective Solution.	Technology of Opensource framework
2.	Security Implementations		e.g. SHA-256, Encryptions, IAM Controls, OWASP etc.
3.	Scalable Architecture	Ensures that the system remains performant,reliable and responsive even in the face of increasing data and user demands.	Technology used
4.	Availability	A Critical aspect as social media platforms generate a continuous stream of data and analysis processes.	Technology used
5.	Performance	The performance od data ingestion processes includind real-time streaming.	Technology used