Project Design Phase-II

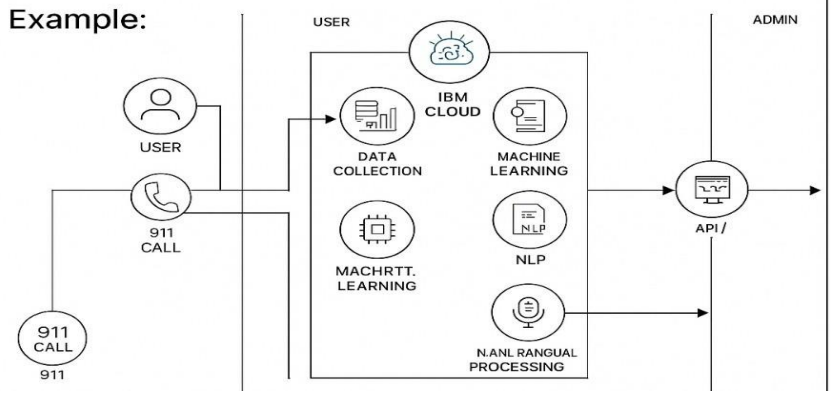
Technology Stack (Architecture & Stack)

Date	27 June 2025
Team ID	LTVIP2025TMID59932
Project Name	Citizen AI - Intelligent Citizen Engagement Platform
Maximum Marks	

Technical Architecture:

CitizenAI Intelligent Citizen Engagement Platform

Example:



Guidelines:

- Include all processes (As an application logic / Technology Block)
- Provide infrastructural demarcation (Local / Cloud
- Indicate external interfaces (third party APIs etc)
- Indicate interface to machine learning models (if applicab)

Table 1:

Citizen AI Intelligent Engagement Platform

S.No	Component	Description	Technology
1	User Interface	How user ineracts with application	User web App, Chatbot etc.
2	Application Logic1	Logic for a process in application	Java / Python
3	Application Logic2	Logic for a process in application	IBM Watson STT service
4	Application Logic3	Logic for a process in application	IBM Watson Assistant
5	External Database	Data Type, Configurations etc.	SQLite
6	Cloud Database	Database Service on Cloud	Database Service on Cloud
7	File Storage	File storage requirements	IBM Block Storage or Other Storage Service
8	External API-1	Purpose of External API e.g. Unique Identification	Aadhar API
9	External API-2	Purpose of External API e.g. Object Recognition	Object Recognition API
10	Machine Learning Model	Purpose of Machine Learning Model	ML framework, Models etc.
11	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Cloud Server Configuration:	Local, Cloud Foundry, Kubernetes etc.

Table 2:

Citizen AI Intelligent Engagement Platform Characteristics

S.No	Platform Element	Description	Technologies / Tools
1	Open-Source Integration	Utilizes community-driven open-source AI components for adaptability and transparency	TensorFlow, PyTorch, Rasa, Scikit-learn
2	Security & Ethics Framework	Implements access controls, ethical AI auditing, and secure data governance	AES-256, RBAC, AI Fairness Toolkit
3	Scalable Citizen Architecture	Built for high demand with modular microservices and container-based infrastructure	Kubernetes, Docker, REST APIs
4	High Availability Systems	Ensures reliability through distributed architecture and inteiligent load balancing	Azure Load Balancer, Cloudflare, CDN
5	Performance Optimization	Supports real-time engagement with optimized response times and adaptive learning models	Redis, CDN, Edge Computing, Caching