

Citizen AI Chatbot - Solution Architecture

Date 26 June 2025

Team ID LTVIP2025TMID32134

Project Name Citizen AI Chatbot

Maximum Marks 4 Marks

Solution Architecture:

The architecture bridges government service challenges with AI-powered solutions by:

- Deploying IBM Granite models for accurate query resolution
 - Integrating sentiment analysis for real-time feedback
 - Ensuring 24/7 multilingual support
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Citizen AI Architecture Diagram:

- **Citizen Input Channels**
 - Web portal
 - WhatsApp/SMS
 - Government office kiosks
- **AI Processing Layer**
 - IBM Granite-3B model (NLP engine)
 - Watson NLP (sentiment analysis)
 - Language translator (5 Indian languages)
- **Backend Services**
 - IBM Cloud Functions (query routing)
 - Cloudant DB (knowledge repository)
 - Redis Cache (response acceleration)
- **Output Systems**
 - Automated responses (text/voice)
 - Government service dashboards
 - Alert escalations (for unresolved queries)
- **Security**
 - IBM Cloud IAM (access control)
 - Data encryption (HIPAA compliant)