

02: AI-Powered Citizen Grievance Redressal System


Samadhan AI

AI-Powered Citizen Grievance Redressal Platform

Smart Grievance Management System

Revolutionizing citizen services with AI-powered complaint resolution. Submit, track, and resolve grievances efficiently with our intelligent platform.

Team Introduction

Name	Role Number	Responsibility/Contribution
		
Pawan Thakur	2105111530026	Research & Front-End Development
Garima Mishra	2305110100054	Wire Framing & UI/UX Design
Dhruv Chaturvedi	2105111630007	Full Stack Development & ML
Aditya Narayan	2305110100011	Research & Front-End Development

Problem statement & Idea Overview

Key Problems to Solve:

1. Delayed Response & Misrouting

Paper-based processing leads to long delays, and complaints are often sent to the wrong departments.

2. No Tracking or Status Updates

Lack of real-time tracking frustrates citizens and forces them to follow up multiple times.

3. Limited Accessibility for All Citizens

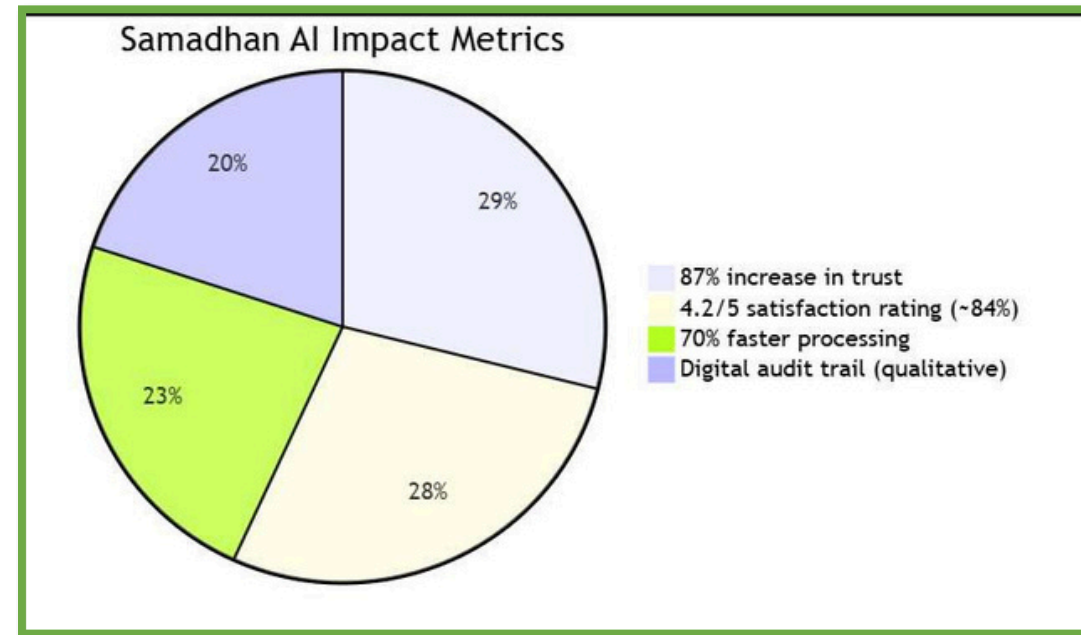
Language barriers make it hard for non-English speakers to file and track complaints effectively.

4. Lack of Insights for Better Planning

Without analytics, administrators can't identify trends or allocate resources efficiently.

Samadhan AI

Samadhan Alis an AI-powered platform that streamlines citizen grievance redressal by automating complaint categorization, routing, and resolution tracking. It enhances transparency, accountability, and response time in governance.



A citizen files a water complaint, waits 15 days for a reply, and the issue moves through three departments before resolution.

Why Choose Samadhan AI?

How It Works

Simple steps to resolve your grievances efficiently

1

Submit Complaint

File your grievance through our user-friendly portal with detailed information

2

AI Processing

Our AI system automatically categorizes and assigns your complaint to the right department

3

Track & Resolve

Monitor progress in real-time and receive updates until your issue is resolved



Citizen Portal

Easy-to-use interface for citizens to submit and track complaints



Secure & Reliable

Enterprise-grade security with 99.9% uptime guarantee



AI-Powered Classification

Automatically categorize and prioritize complaints using advanced AI



Real-time Analytics

Track complaint trends and resolution metrics in real-time

Components

System Architecture:

1. Frontend & Gateway

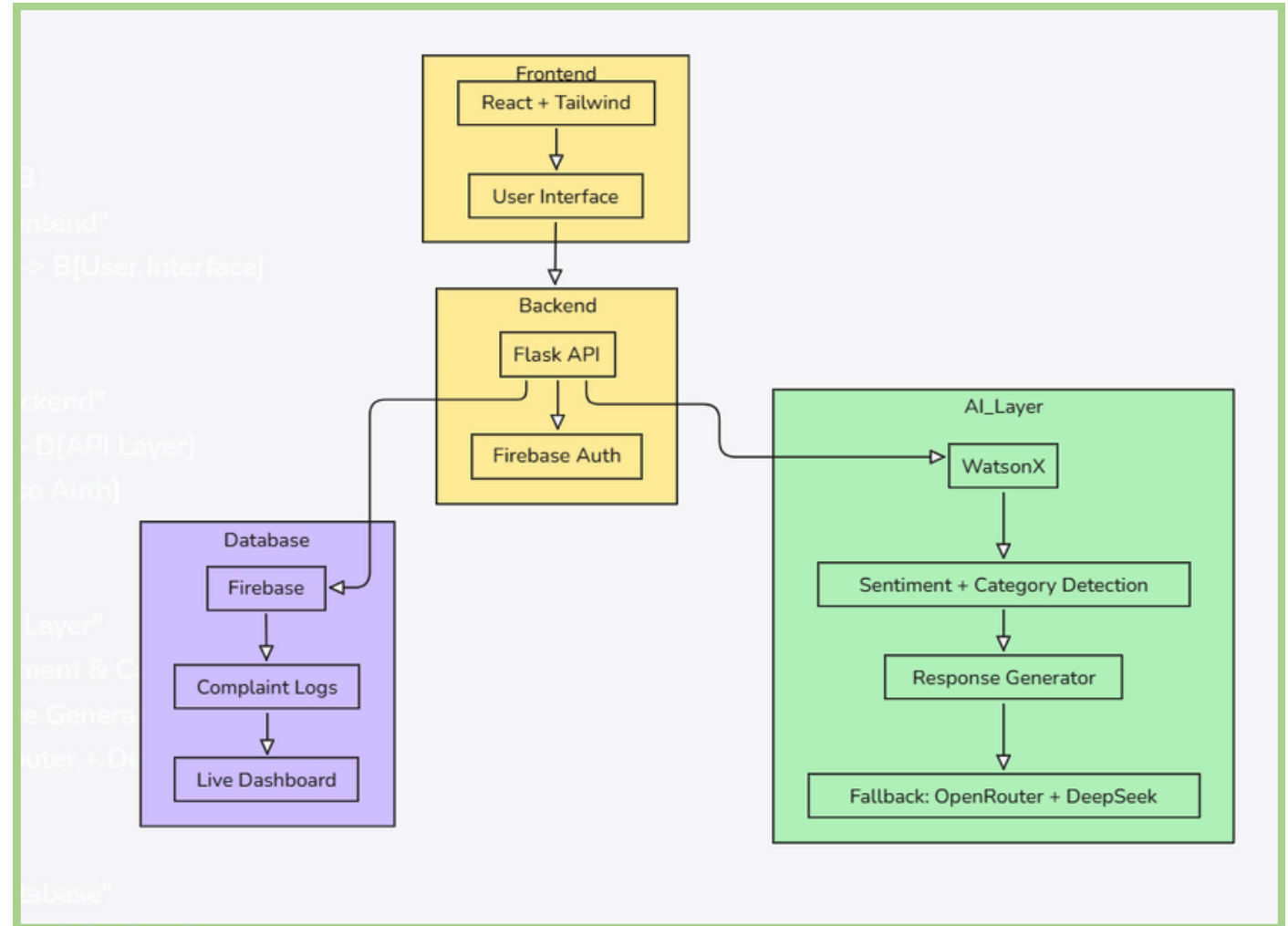
- Web, Mobile, Admin Interfaces
- API Gateway for secure routing

2. Core Microservices

- Auth, User Management
- Complaints, Notifications, Analytics

3. AI & Data Layer

- Watsonx + DeepSeek AI + Langchain
- Firebase Auth, Firebase Storage



Process Flow

AI-Powered Complaint Processing:

1. Multi-Modal Inputs

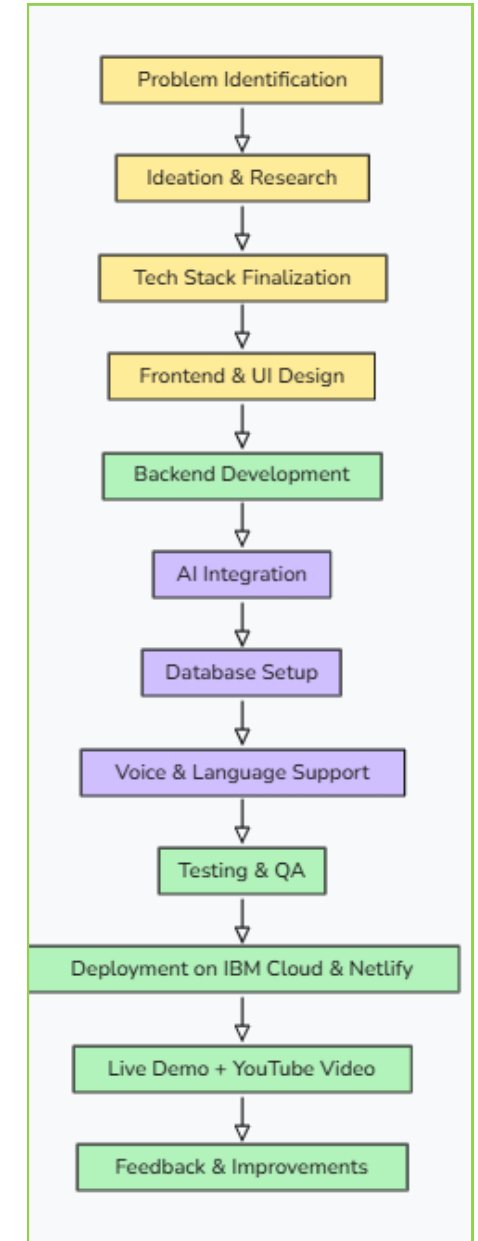
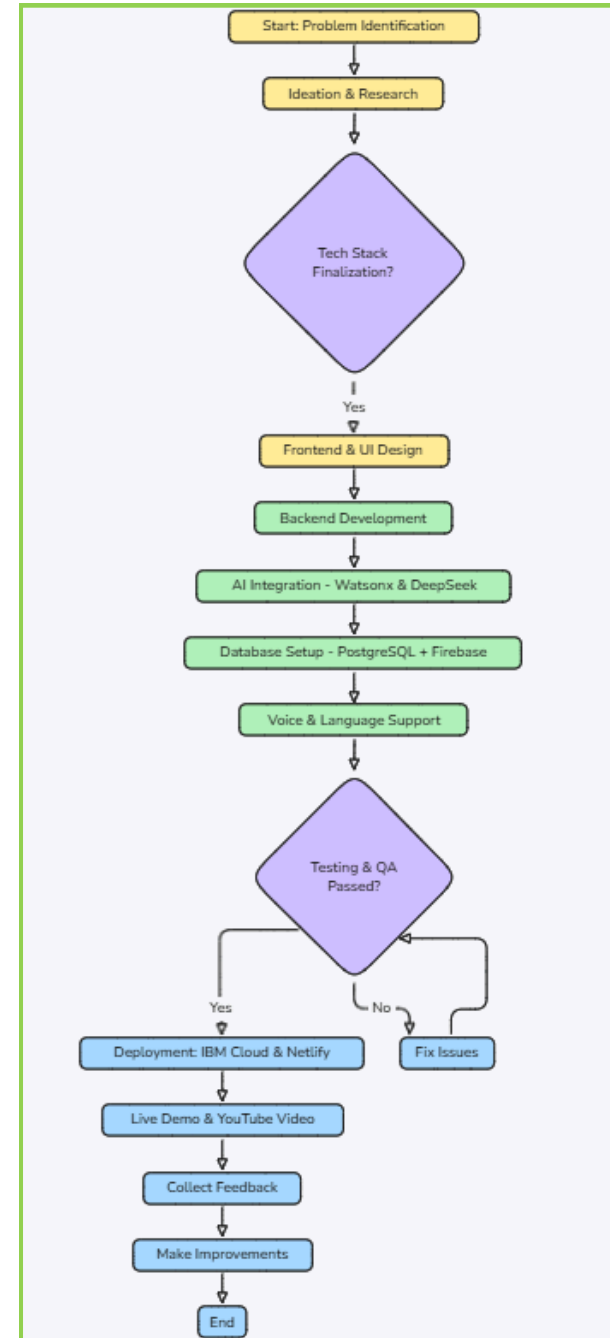
Accepts voice, text, and image complaints.

2. Pre-processing & Language Handling

- Voice → Speech-to-Text + audio validation
- Cleans data and translates to standard format.

3. AI-Driven Processing

- LangChain NLP pipeline (entity extraction)
- Uses WatsonX & DeepSeek to classify and route complaints.
- Sentiment Analysis (emotion, urgency)
- Category Classification + Priority Scoring



How AI Solves the Problem:

❑ Universal Language Understanding

Detects and translates 11+ languages in real time for seamless complaint intake.

❑ Intelligent Routing & Prioritization

Uses sentiment scores and historic patterns to categorize issues and direct them correctly.

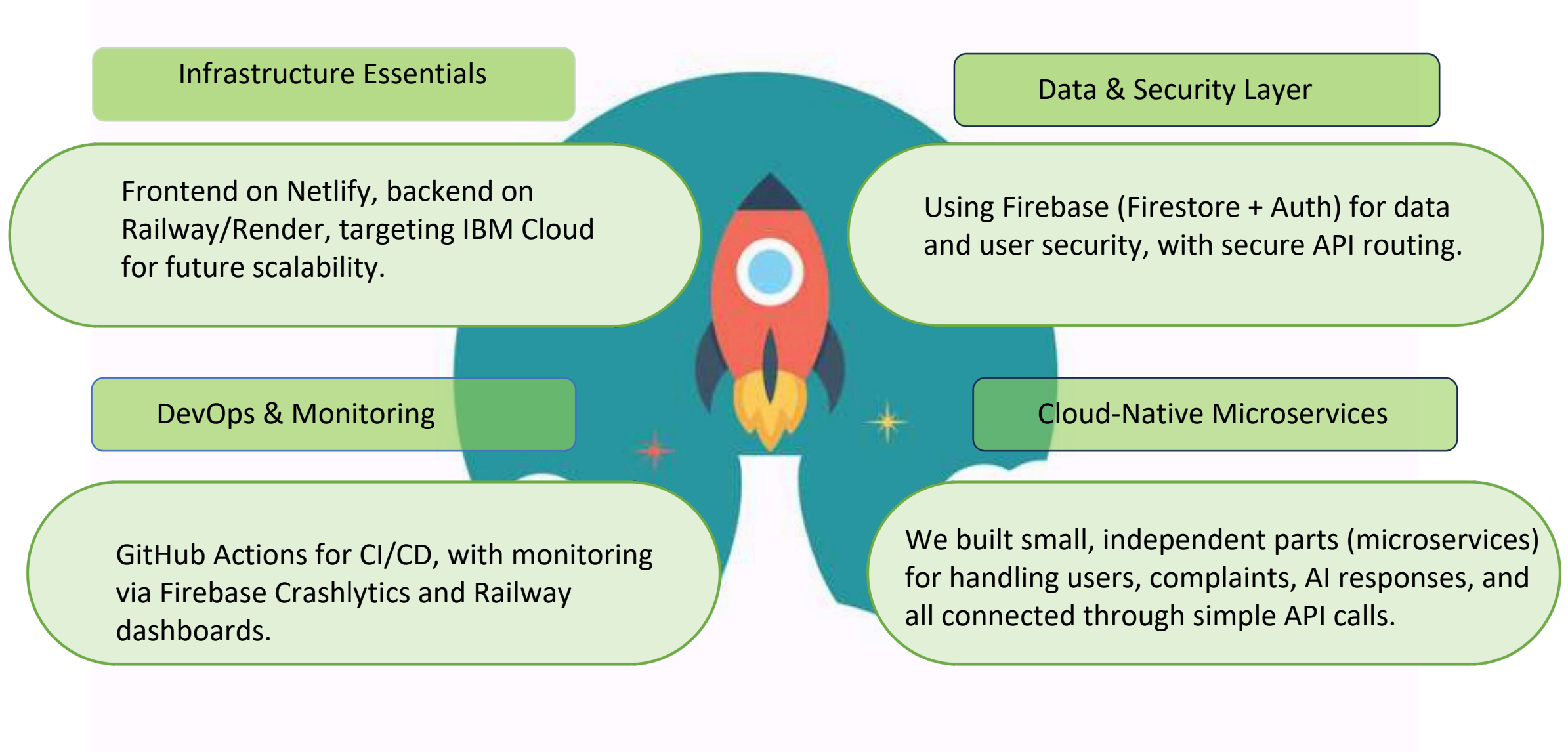
❑ Advanced AI + Langchain + RIG & Prompt Engineering

Combines LangChain, Watsonx + DeepSeek, embeddings, and context-aware prompts for precise analysis.

❑ Dynamic Knowledge Base & Continuous Learning

Stores policies as embeddings, injects real-time context, and learns from outcomes.

Deployment Model

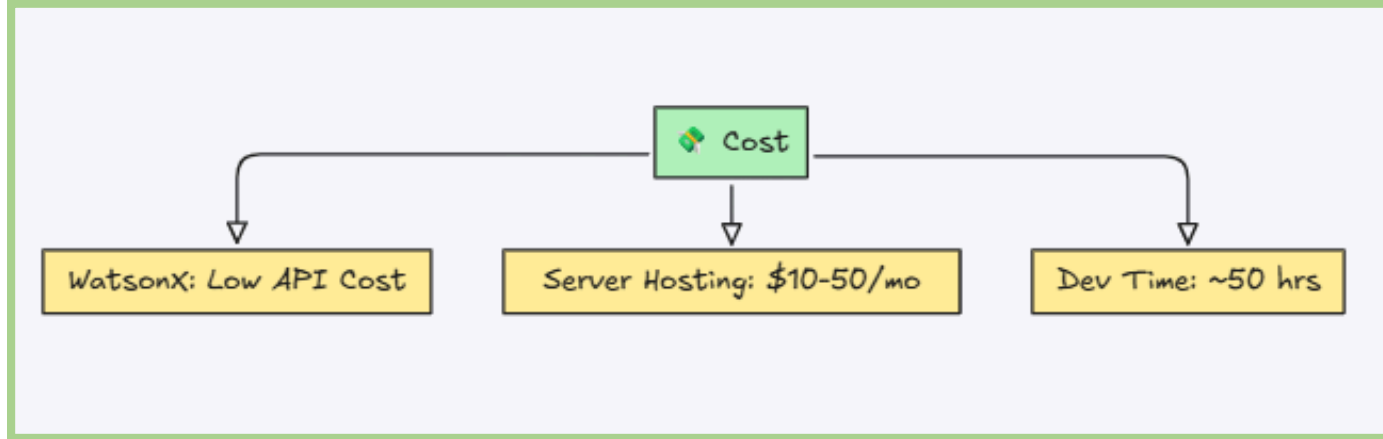


Empowering Citizen & Government

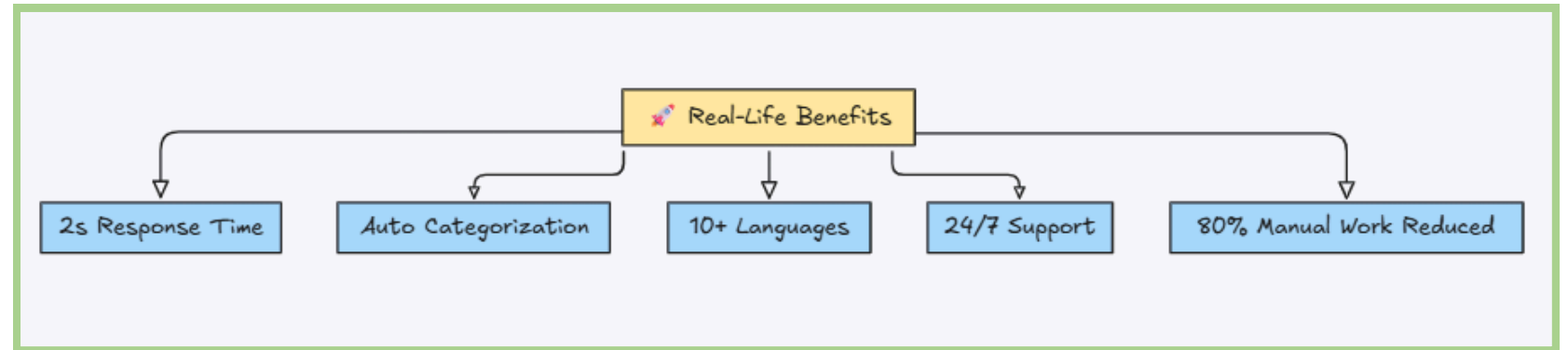
For Citizens	For Government
<input type="checkbox"/> Faster Resolution -60% reduction in complaint resolution time	<input type="checkbox"/> Improved Efficiency -50% reduction in administrative workload
<input type="checkbox"/> Complete Transparency -Real-time status tracking and updates	<input type="checkbox"/> Data-Driven Decisions -Comprehensive analytics and reporting
<input type="checkbox"/> Easy Access -File complaints anytime, anywhere via web/mobile	<input type="checkbox"/> Resource Optimization -Smart workload distribution among officials
<input type="checkbox"/> Better Communication -Automated notifications and feedback collection	<input type="checkbox"/> Enhanced Accountability -Complete audit trail and performance metrics

Measurable Outcomes:-85% citizen satisfaction rate -40% faster complaint processing -30% cost reduction in operations -95% complaint tracking accuracy

Cost vs Benefits in Real Life



Real life Benefits



Samadhan AI can be prototyped in 2 weeks and implemented in 3 months, using a mix of free and paid APIs with dependencies on government systems and training, ultimately delivering high ROI through improved satisfaction, cost savings, and efficiency.

Future possibilities

☐ Real-Time & Secure Inputs

Mobile apps, voice-emotion detection, IoT feeds, blockchain logging

☐ Global & Smart-City Integration

Pan-India → international rollout, embedded in city platforms, AI-driven policy

☐ Continuous Innovation

50+ languages, digital IDs, emergency optimization, personalized services

