

AI for Bharat Hackathon

Powered by **aws**



Team Name : Loop Lords

Team Leader Name : Manan Mitra

Problem Statement : The "Trust Gap" in Digital Bharat: 800M+ users are online, but the elderly and rural population are vulnerable to vernacular scams (Digital Arrests, Fake UPI QRs) that existing tools cannot detect.

Brief about the Idea

Saterix: The Cognitive Firewall for India's Next Billion Users



Multimodal AI Security Agent

Powered by Amazon Bedrock



Upload Screenshots & Voice Notes

UPI QRs, Bills, or Voice Messages



AI "Sees" & "Hears" Threats

Computer Vision + Audio Intelligence



Vernacular Explanations

Simple Hindi, Bengali, or Tamil

Multimodal AI



CLIP

Gemini

GPT-4V

Vision

Language

Audio

Combining Vision, Language, and Audio

Multimodal AI Architecture

Solution & USP

⚡ Differentiation

Existing Tools (Truecaller): Blacklist phone numbers

Saterix: Analyzes intent & content • Detects fake bills from new numbers

🧠 Problem Solving

Bridges **Digital Literacy Gap** with simple voice messages

"Dadi, this is a fake bill. Do not pay."

✨ USP

Multimodal Intelligence: Analyzes Audio + Vision + Text simultaneously

Detects sophisticated Digital Arrest & deepfake scams



Empowering the Next Billion Users

List of Features



Visual Threat Detection

Amazon Titan Multimodal scans screenshots for:

Fake Bank Logos

Forged Seals

Malicious QRs



Audio Forensics

Amazon Transcribe + Claude 3.5 Sonnet detect panic keywords:

"Police Case"

"Account Freeze"



Vernacular Defense

Instant alerts in **10+ Indian languages** for elderly users



Advanced Threat Detection System

Process Flow Diagram

INPUT

User uploads Screenshot or Voice Note



PROCESSING

Data sent to AWS Lambda



INTELLIGENCE



Image

→ Amazon Titan (Visual Analysis)



Audio

→ Amazon Transcribe (Text Conversion)



Reasoning

→ Claude 3.5 Sonnet (Scam Verdict)

OUTPUT

Risk Score (Safe/Unsafe) + Local Language Audio Alert



Secure UPI Payment Protection

Wireframes

Streamlit Mobile Web App Interface



Upload Button

Large, accessible button for uploading screenshots or voice notes



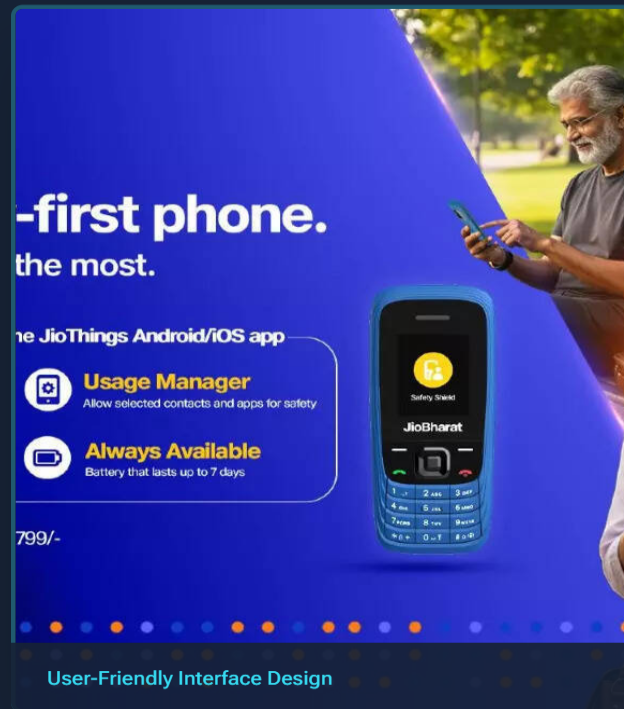
Result Card

Clear **Red/Green** safety indicator with risk score



Audio Alert

Voice explanation in user's native language



Architecture Diagram



Frontend

Streamlit (Mobile Web App)



API Layer

Amazon API Gateway



Compute

AWS Lambda (Serverless)



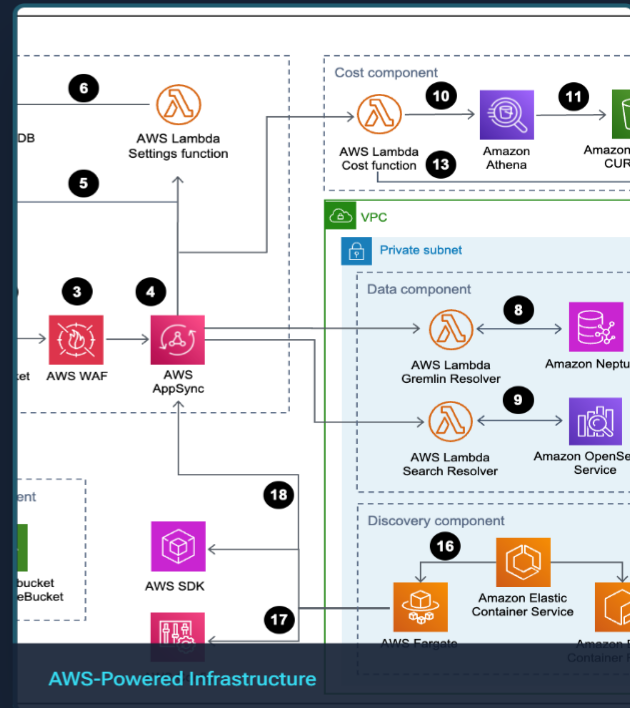
AI Engine

Amazon Bedrock (Claude 3.5 & Titan)



Storage

Amazon S3 (Evidence Repo) + DynamoDB (User Logs)



Technologies Used



Amazon Bedrock

Foundation Models: Claude 3.5 Sonnet, Titan Multimodal



Amazon Q

Accelerates code development and debugging



AWS Lambda

Serverless, event-driven backend logic



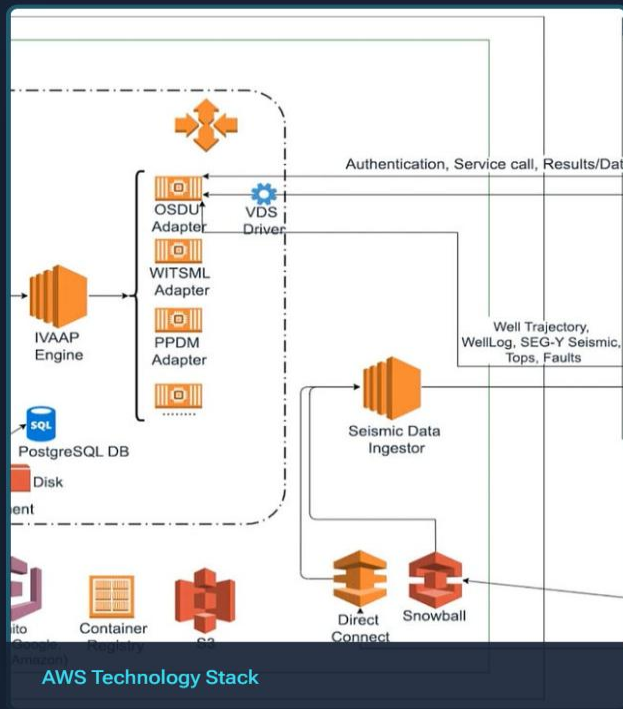
Amazon Transcribe

Converting vernacular audio to text



Streamlit (Python)

User interface development



Estimated Implementation Cost

📉 Infrastructure Cost: Low

Serverless architecture means we **only pay when a user scans a scam**

👛 Revenue Model (B2B2C)



Freemium

Free for individual users



Family Shield ₹49/mo

Alerts sent to children if parents receive scam calls



Bank API

Banks pay per API call to verify high-risk transactions

Cost-Benefit Analysis

Serverless Compute	Low
AI Processing	Scalable
Maintenance	Minimal
Revenue Potential	High

Impact on Bharat



Protects Financial Dignity

Safeguards the elderly and vulnerable from financial exploitation and fraud



Reduces Massive Financial Loss

Prevents **₹22,845 Crore** annual loss to cyber fraud in India



Builds Digital Trust

Fosters confidence in Digital Rupee and UPI ecosystem for the next billion users



Secure Digital Bharat

Empowering India's next billion users with AI-driven security

800M+

Users Protected

Innovation partner **I12S**

Media partner **YOURSTORY**

AI for Bharat Hackathon

Powered by **aws**

Thank You

