AI for Bharat Hackathon

Powered by **aws**

Team Name : Saterix AI

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
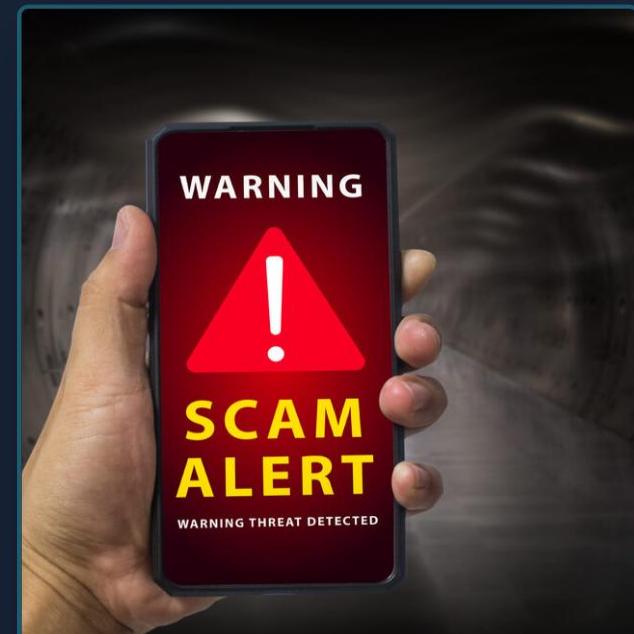
Amazon Transcribe + Claude 3.5 Sonnet detect panic keywords:

| "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
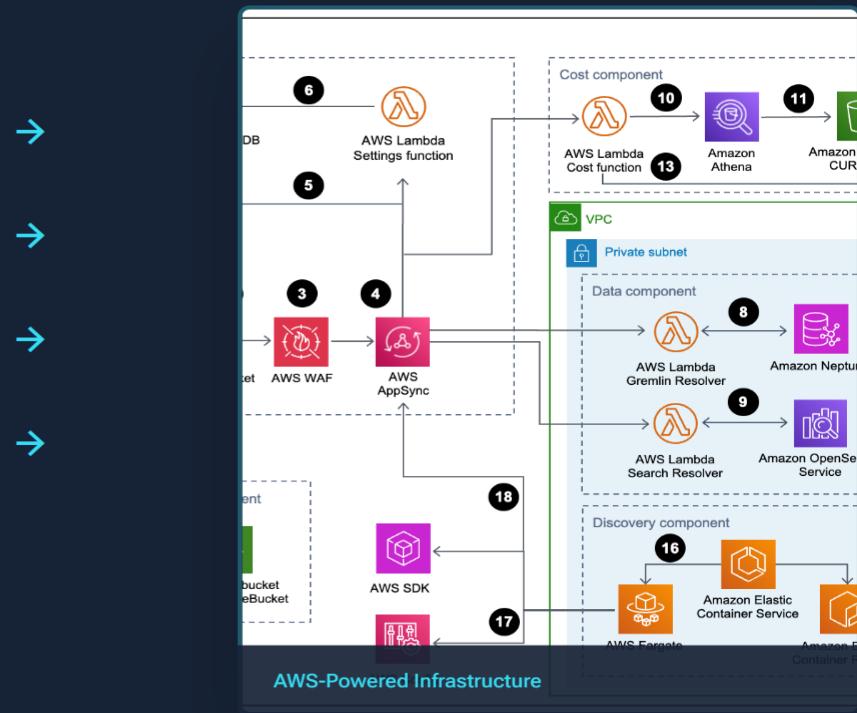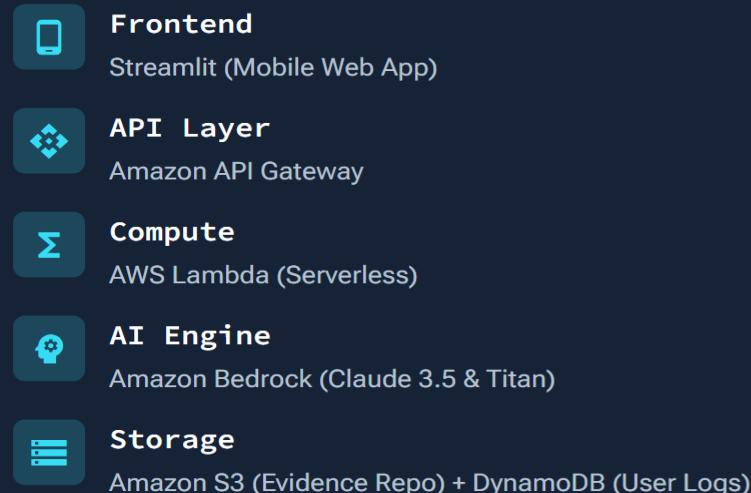
User-Friendly Interface Design

Architecture Diagram

📱 **Frontend** →
Streamlit (Mobile Web App)

🔷 **API Layer** →
Amazon API Gateway

Σ **Compute** →
AWS Lambda (Serverless)

🧠 **AI Engine** →
Amazon Bedrock (Claude 3.5 & Titan)

📋 **Storage** →
Amazon S3 (Evidence Repo) + DynamoDB (User Logs)

AWS-Powered Infrastructure

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
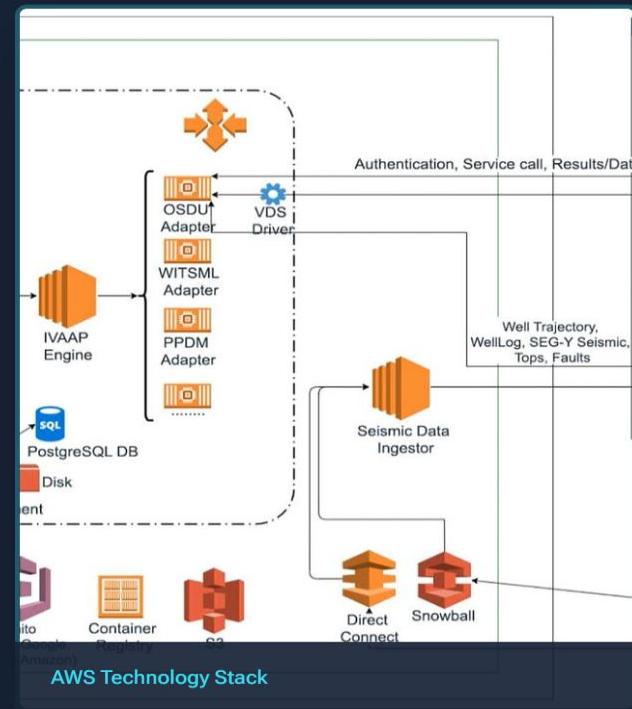
Amazon Transcribe
Converting vernacular audio to text

Streamlit (Python)
User interface development

AWS Technology Stack

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