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AI for Bharat Hackathon

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Problem Statement : AI-generated and manipulated images are rapidly driving fraud and misinformation across India.

There is no trusted, real-time system to verify visual authenticity.

Brief about the Idea:

Drishti.ai is an AI-powered visual trust and fraud detection system designed to analyze images in real time and determine whether they are:

- AI-generated
- Manipulated
- Authentic

The system provides:

Risk score (0–100)

Clear explanation of findings

Real-time image verification

Drishti.ai aims to become India's visual authenticity infrastructure.

How Is It Different?

Unlike basic AI image detectors, Drishti.ai:

- Detects both AI-generated AND manipulated real images
- Uses hybrid forensic + deep learning methods
- Provides explainable risk scoring
- Is optimized for Indian fraud use-cases
- Is designed as scalable infrastructure, not just a demo tool

How It Solves the Problem

- Real-time verification
- Explainable AI output
- Risk categorization (Low / Medium / High)
- API-ready for banks, media, and government systems

USP

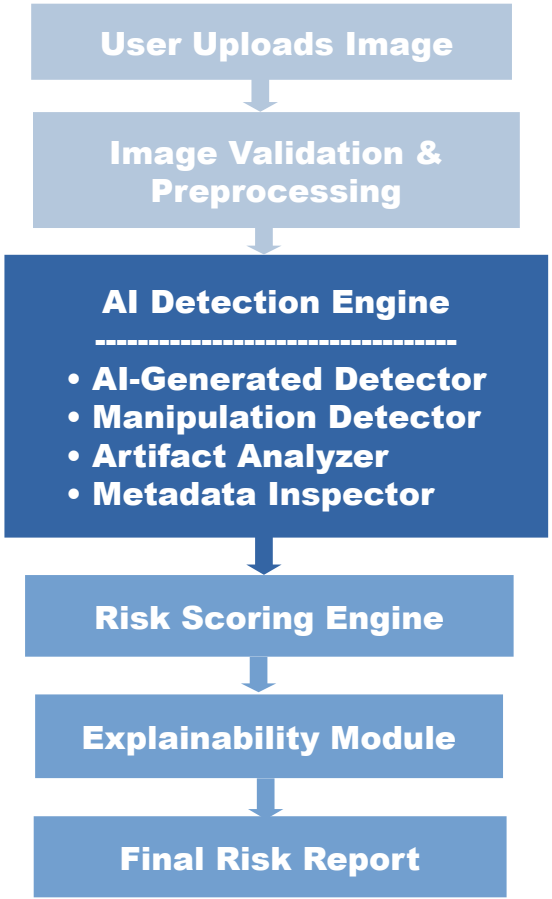
- Explainability-first AI
- India-focused fraud detection
- Modular detection engine
- Enterprise and citizen-ready architecture

List of features offered by Drishti.ai

- AI-Generated Image Detection
- Manipulated Image Detection
- Visual Artifact Analysis (Lighting, Texture, Shadows)
- Metadata Inspection (EXIF & Software Signatures)
- Risk Scoring System (0–100 Scale)
- Explainable AI Output
- Real-Time Processing (< 5 seconds)
- REST API for Integration
- Cloud-Scalable Infrastructure

Flow diagram

End-to-End Image Verification Pipeline



System Wireframe:

Drishti.ai
AI-Powered Visual Trust Platform

Select Mode:
(•) Citizen Mode ( ) Enterprise Mode

Drag & Drop Image Here or Click to Upload

Supported Formats: JPG, PNG

Language: English ▼

Analyze Image

Drishti.ai – Verification Report

Image Preview

Trust Meter: 82% Risk

Risk Level: HIGH 🔴

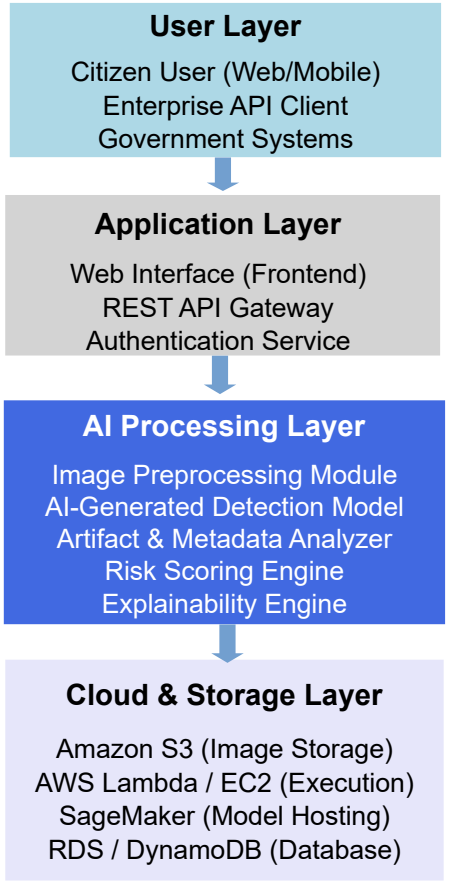
Detection Summary:
✓ AI Generated (87% confidence)
✓ Manipulation Detected

Detected Artifacts:
• Lighting inconsistency
• Texture anomaly
• Missing camera metadata

Explainable Insights:
This image contains diffusion-model noise patterns and metadata irregularity.

Recommendation:
Verify source before sharing or trusting.

Architecture diagram:



Technologies to be used:

Frontend

HTML, CSS, JavaScript

React.js (Web Interface)

Responsive UI (Web & Mobile)

Backend

Python (Flask)

REST API Gateway

JWT Authentication

AI / ML Technologies

PyTorch (Model Development)

OpenCV (Image Processing)

Metadata & Artifact Analysis

Explainable AI (Grad-CAM / SHAP)

Cloud & Deployment (AWS)

Amazon S3 (Image Storage)

AWS EC2 (Model Hosting)

Amazon RDS (Database)

DevOps & Security

Docker (Containerization)

Git & GitHub

Estimated implementation cost:

🔷 Prototype Phase

Can be developed using AWS Free Tier

Minimal operational cost during hackathon

🔷 Small Scale Deployment (Cloud Infrastructure)

AWS Cloud Hosting: ₹8,000 – ₹15,000 per month

(Depending on usage and traffic volume)

🔷 Scalable Architecture

Cost scales proportionally based on:

Number of users

Image upload volume

Traffic load

Enterprise / Government integrations

Implementation & Impact Strategy:

- **Target Users**
  - Citizens (Fact-checking images)
  - Media Houses
  - Government Agencies
  - Enterprises
- **Deployment Model**
  - Web & Mobile Accessible
  - Cloud-hosted on AWS
  - API integration for enterprises
- **Scalability**
  - Auto-scaling cloud infrastructure
  - Modular AI architecture
  - Can handle high-volume image verification
- **Impact for Bharat**
  - Reduces misinformation spread
  - Supports digital trust ecosystem
  - Assists law enforcement & cyber cells
  - Promotes responsible AI usage

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Thank You