Task 1: On-Device Face Recognition & Mood Detection App

Platform: Android (preferred) or iOS
Mode: Fully on-device / offline

Requirements:
1. Upload **2–3 photos** of yourself for face enrolment.
2. Capture a **live selfie** and verify whether it is the same person.
3. Detect the **mood/emotion** from the selfie (e.g., Happy, Neutral, Sad, Angry).
4. Implement **basic liveness detection** (blink, smile, or head movement).
5. All face recognition and mood detection must run **locally on the device**.

Constraints (Applicable to Task 1 only):
- No server-side processing
- ❌ No cloud-based AI services
- ❌ No online LLM APIs
- ✅ Only on-device / offline models and libraries are allowed

Expected Output Example:

```
{
  "is_same_person": true,
  "confidence": 0.91,
  "emotion": "Neutral"
}
```

Task 2: AI-Powered Visual Understanding & Reasoning System

Platform: Your choice (mobile, desktop, or backend)
Requirements:

1. Upload an image.
2. Detect objects in the image.
3. Generate:
- Scene summary
- Potential risks or anomalies
- AI-based reasoning explaining the risks or observations

Expected Output Example:

```
{
  "scene": "Construction site",
  "objects": ["worker", "ladder"],
  "risks": ["Worker climbing ladder without safety harness"],
  "ai_reasoning": "Lack of safety equipment increases fall risk"
}
```

There are **no restrictions** on model choice or deployment style for Task 2.