## Traffic Light Indicator Approach:

Using the **Traffic Light Indicator Approach in Fraud Analysis** is a smart way to visually categorize and prioritize transactions, accounts, or behaviors based on their **risk level or fraud likelihood**.

Here's how it typically works in a fraud detection context:

## 🚦 Traffic Light Colors & Their Meaning in Fraud Analysis

| Color | Status | Interpretation | Action Required |
|-------|--------|----------------|-----------------|
| 🟢 Green | Low Risk | Legitimate activity, no signs of fraud | Monitor periodically |
| 🟡 Yellow | Medium Risk | Suspicious patterns, may require further review | Flag for manual inspection / validation |
| 🔴 Red | High Risk | Strong indicators of fraud or confirmed fraud | Immediate investigation or escalation |

Examples:

### 1. Transaction Monitoring System

- **Green:** Normal transaction patterns based on customer history.

- **Yellow:** Slight deviation in behavior (e.g., a higher amount, new location).

- **Red:** Drastic behavior change, flagged by rules (e.g., high-value transaction overseas at odd hours).

### 2. Account Risk Scoring

- **Green:** Score below 40 → No suspicious activities.

- **Yellow:** Score 40–70 → Anomalies detected, moderate risk.

- **Red:** Score above 70 → Potential fraud, lock account or alert fraud team.

### 3. Insurance Claim Review

- **Green:** Proper documentation, no red flags.

- **Yellow:** Minor inconsistencies or past borderline cases.

- **Red:** Pattern of frequent claims, fake documents, or verified fraud indicators.

# 🛠 How to Implement

1. **Define Risk Rules or Scoring Criteria**

   - Rule-based (e.g., if amount > X and country ≠ home → Yellow)

   - ML models (e.g., fraud probability score > 0.8 → Red)

2. **Assign Traffic Light Colors**

   - Based on thresholds or confidence levels.

3. **Integrate into Dashboards/Reports**

   - Use tools like Excel, Power BI, Tableau, or custom fraud detection platforms.

4. **Set Up Alerts/Actions**

   - Green: No action needed.

   - Yellow: Queue for analyst review.

   - Red: Auto-flag, freeze, or escalate.