

# Sample Forensic Investigation Report

## DocShield AI – Intelligent Document Forgery & Deepfake Detection Platform

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### Report Information

**Report ID:** FR-2026-CLM-2091

**Claim ID:** CLM-2091

**Hospital Name:** Apollo Health Care Center

**Provider ID:** PRV-8821

**Patient ID:** PT-44107

**Document Type:** Discharge Summary + Lab Report + Medical Bill

**Upload Date:** 29 April 2026

**Upload Time:** 10:42 AM

**Review Date:** 29 April 2026

**Reviewer Assigned:** Senior Fraud Reviewer – Team A

**Final Review Status:** High Fraud Risk

**Case Priority:** P1 – Critical Investigation

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### Executive Summary

DocShield AI performed a full forensic investigation on the uploaded healthcare claim documents submitted under Claim ID CLM-2091.

The system detected multiple suspicious tampering patterns including:

- Fake Signature Detection
- Duplicate Medical Report Matching
- Metadata Mismatch
- Partial AI-Generated Content Detection
- Removed Watermark Evidence
- Overwritten Billing Amount
- QR Code Inconsistency
- Template Forgery Suspicion

Overall fraud confidence reached:

### 96.4% Fraud Probability

The claim was automatically escalated for senior reviewer validation and final administrative lock.

Recommendation:

### Immediate Rejection + Compliance Escalation

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### AI Detection Summary

Detection Type	Status	Confidence
Copy-Paste Fraud	Detected	91%
Overwritten Text	Detected	94%
Added Content	Detected	88%
Removed Region	Detected	86%
Merged Document Fraud	Detected	83%
Watermark Removal	Detected	89%
Irregular Spacing	Detected	78%
Fully AI-Generated Fake Document	Partial	72%
Partial AI Edits	Detected	90%
Fake Signature / Stamp	Critical	97%
QR Code Inconsistency	Detected	84%
Metadata Mismatch	Critical	95%
Duplicate Report Detection	Critical	98%
Cross-Document Fraud Match	Detected	93%
Template Forgery	Detected	87%

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#### Forensic Visual Analyzer Findings

##### Page-Level Suspicious Regions

##### Page 1 – Discharge Summary

##### Region A

**Location:** Doctor Approval Section

**Issue:** Signature mismatch + overwritten signature trace

**Finding:**

The doctor's digital signature pattern does not match historical verified records. Stroke layering indicates possible replacement using image overlay.

**Confidence:**

97%

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**Region B**

**Location:** Diagnosis Paragraph

**Issue:** Copy-paste inconsistency

**Finding:**

Text baseline shift and abnormal OCR confidence detected. Font structure mismatch suggests copied content inserted from external source.

**Confidence:**

91%

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**Page 2 – Medical Bill****Region C**

**Location:** Final Billing Amount

**Issue:**

Overwritten numeric values detected

**Finding:**

Original bill amount appears replaced from ₹48,000 to ₹1,48,000 using layered overwrite editing.

**Confidence:**

94%

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**Region D**

**Location:** Footer Watermark Area

**Issue:**

Removed watermark traces

**Finding:**

Compression artifact mismatch strongly indicates watermark removal from original provider-issued report.

**Confidence:**

89%

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**Document DNA Fingerprint Analysis****Unique Fingerprint Generated**

**Fingerprint ID:**

DNA-8821-CLM2091-X9FQ27

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## Source Authenticity Verification

### Font Consistency Check

Status:

Failed

Finding:

Mixed font families found across a single page where original template should contain uniform formatting.

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### Noise Pattern Consistency

Status:

Failed

Finding:

Different scanner noise patterns indicate document parts were sourced from multiple origins.

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### Template Authenticity

Status:

Suspicious

Finding:

Layout structure matches previously flagged forged templates from Provider Group Cluster-17.

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### Reused Report Tracking

Status:

Matched

Finding:

Radiology report found reused in:

- Claim CLM-1148
- Claim CLM-3021
- Claim CLM-1987

Duplicate probability:

98%

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### Explainable AI Findings

#### Why Was This Flagged?

The system flagged this claim due to multiple high-confidence fraud indicators occurring simultaneously across separate pages.

Primary triggers:

- Signature forgery
  - Duplicate document reuse
  - Metadata inconsistency
  - Amount overwrite fraud
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### **Which Page?**

High-risk findings detected on:

- Page 1
  - Page 2
  - Page 4
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### **Tampering Type**

Major fraud classification:

#### **Intentional Document Manipulation**

Subcategories:

- Financial inflation fraud
  - Identity verification fraud
  - Duplicate claim fraud
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### **Evidence Traceability**

All findings mapped using:

- OCR confidence layers
  - Pixel inconsistency analysis
  - Metadata forensic extraction
  - Signature vector comparison
  - Cross-document similarity engine
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### Audit Timeline

Timestamp	Event
10:42 AM	Document uploaded
10:43 AM	Metadata extraction started
10:44 AM	OCR preprocessing completed
10:45 AM	Signature fraud detected
10:46 AM	Duplicate report matched
10:47 AM	Reviewer escalation triggered
10:49 AM	Senior review assigned
10:55 AM	Final fraud confidence locked
11:00 AM	Admin compliance escalation

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#### Reviewer Decision Engine

#### Final Status

**HIGH FRAUD RISK**

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#### Reviewer Notes

Strong evidence confirms deliberate tampering.

Provider shows repeated duplicate report patterns across prior submissions.

Immediate administrative intervention recommended.

Claim should not proceed for adjudication.

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#### Escalation Recommendation

#### Recommended Actions

- Reject claim immediately
- Freeze provider verification
- Compliance audit initiation

- Provider fraud watchlist tagging
  - Cross-check historical claims from same hospital
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### **Provider Risk Intelligence**

#### **Hospital Risk Score**

Provider:

Apollo Health Care Center

Current Risk Score:

**92 / 100**

Risk Level:

**Critical**

Reason:

Repeated suspicious submissions and duplicate report clusters observed across multiple claims.

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### **Final Conclusion**

This claim presents strong forensic evidence of intentional fraud.

The combination of signature forgery, duplicate document reuse, metadata mismatch, and financial overwrite strongly supports immediate rejection.

DocShield AI recommends:

#### **REJECT CLAIM + START COMPLIANCE ACTION**

This report is audit-safe, reviewer-verifiable, and legally traceable for adjudication workflow.

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### **Generated By:**

#### **DocShield AI**

Intelligent Document Forgery & Deepfake Detection Platform

AB PM-JAY Auto Adjudication Hackathon

Problem Statement 03

Document Forgery / Deepfake Detection System

Enterprise Healthcare Fraud Prevention Platform