


File: X51008099081.png SHA-256: 9f59acf9fa1bf60e... Size: 932x1659 px Analysed: 2026-05-12 00:28:39 UTC Model: FraudX v2-multi (ResNet-18, ep13, thr=0.08)



VERDICT — Low risk

Looks clean

No regions exceeded the forgery threshold. No VAT QR present to cross-check.

15%

CNN forgery confidence

Patch CNN: Low risk
forgery confidence 15%

VAT QR: No QR
no ZATCA QR detected

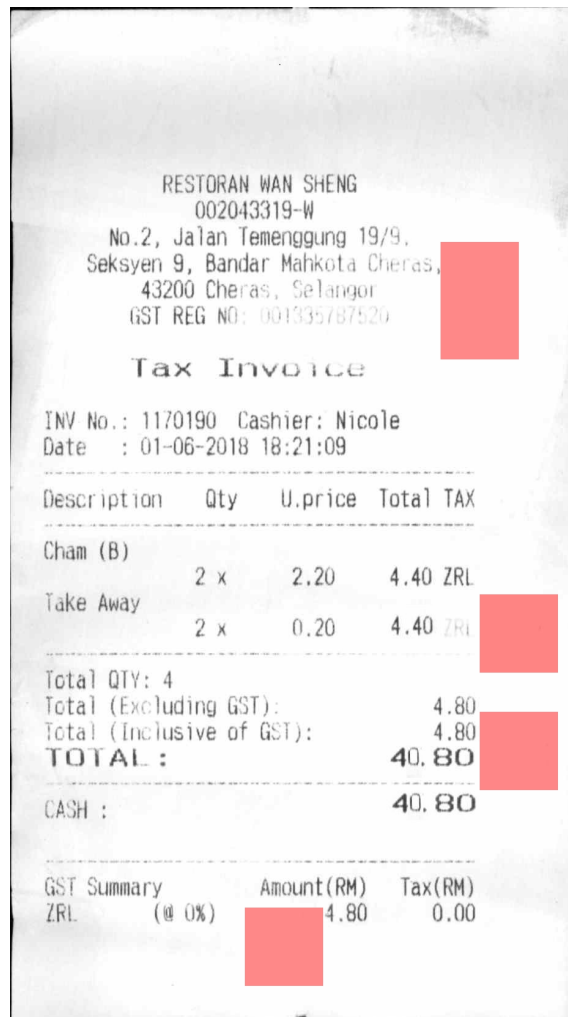
Key findings

- No regions exceeded the model's forgery threshold.
- Showing the top 5 highest-confidence regions (highest score 71%). 103 of 188 text-bearing regions exceeded the model's threshold overall.
- Edit type predicted across the top 5 regions: 5 × deletions / erasures.
- Targeted fields: 5 × Product lines.
- This file is an exact duplicate of one already analysed in this session.

VAT QR check

No ZATCA-format VAT QR detected on this receipt.

Document with suspicion heatmap (red = CNN-flagged)



Top suspicious regions

Each thumbnail is the 128x128 patch fed to the CNN, with its score and predicted edit type / field.

<p>1</p> <p>71% CUT Product</p>	<p>2</p> <p>70% CUT Product</p>	<p>3</p> <p>70% CUT Product</p>	<p>4</p> <p>70% CUT Product</p>	<p>5</p> <p>70% CUT Product</p>
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Approach

ResNet-18 patch classifier (128×128, stride 64) trained on FINDIT2 (Tornes et al., ICDAR 2023). Two auxiliary heads classify the modification technique and the document field affected; the binary backbone is frozen so the headline patch precision (92.25%) is preserved while adding explainability. The image-level fraud score is the top-k mean of patch probabilities over text-bearing regions only (edge density ≥ 0.02). The Saudi VAT QR check validates the ZATCA Phase-1 TLV format and cross-checks the QR's declared totals against pytesseract OCR of the printed receipt body.

Reported numbers vs paper

METRIC	OURS	PAPER
Patch precision	92.25% (this work)	79.41% (paper OH-JPEG)
Patch F1 / AUC	91.79 / 0.97	—
Image-level F1 (top-k)	29.66	28.39 (paper ChatGPT-relaxed)
Mod head test acc	CPI 73 · CUT 100 · IMI 38 · PIX 55 · Other 14	
Entity head test acc	Total/payment 67 · Metadata 47 · Product 27 · Company 24	

Raw model output

- Patches scored: 350 Text-rich: 188 Flagged ≥ 0.08 : 103
- Top-k mean fraud score: 0.1501 CNN risk: LOW Duplicate: 1.00 (exact_duplicate)
- Patch CNN flagged 103 of 188 text-rich patches (top score 0.71).
- Top 5 suspicious regions clustered around image coordinates (768,960), (768,1152), (384,1472), (704,448), (704,384).
- Predicted modification mix across top regions: 5× CUT.
- Predicted entity types: 5× Product.
- Document is an EXACT duplicate of a file already analysed in this session (resubmission).