

File: aldawaa__vat_zeroed.png SHA-256: 12be58aff3a5177f... Size: 1700x2363 px Analysed: 2026-05-12 00:27:42 UTC
Model: FraudX v2-multi (ResNet-18, ep13, thr=0.08)



VERDICT — High risk

Likely forged

Multiple regions show strong evidence of editing.

100%

CNN forgery confidence

Patch CNN: High risk
forgery confidence 100%

VAT QR: Caveats
1 QR

Key findings



- Multiple regions show strong evidence of editing.
- Showing the top 5 highest-confidence regions (highest score 100%). 374 of 513 text-bearing regions exceeded the model's threshold overall.
- Edit type predicted across the top 5 regions: 3 × deletions / erasures and 2 × copy-paste edits.
- Targeted fields: 2 × Total / payment lines and 1 × Company / header info.
- This file is an exact duplicate of one already analysed in this session.

VAT QR check

● ■■■■■■ ■■■■■■ 340 · VAT# 300544591200003 · 37.99 SAR — warn

Document with suspicion heatmap (red = CNN-flagged)


فاتورة ضريبية
Taxable Invoice
Sales Trans

<p>From: Aldawaa Medical Company Address: Issue Date: 2026-03-17 03:18 AM Telephone: Invoice No.: 34024609813808 Branch No.: P340 Register No.: P340_2 Pharmacist Name: الدواء يوسف احمد علي VAT Number: 300544591200003 Customer Name: RAYAN Alsubhi Customer Mobile No.: 966553054844 Arbahi Loyalty No.: 8989282</p>	<p>شركة الدواء الطبية بيق - الصفا - شارع عثمان بن عفان 2026-03-17 03:18 AM هاتف: 34024609813808 رقم الفرع: P340 رقم الجواز: P340_2 اسم الصيدلي: الدواء يوسف احمد علي 300544591200003 رقم العميل: RAYAN Alsubhi 966553054844 رقم جوال العميل: 8989282 رقم عضوية ارباهي:</p>
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Sr. No.	Item Code	Item Description	QTY	Unit Price	Discount	VAT %	VAT Amount	Total Price (SAR)
مستل	رقم الصنف	وصف الصنف	الكمية	سعر الصنف	قيمة خصم العروض	نسبة الخصم	قيمة الضريبة المضافة	السعر الاجمالي ريال سعودي
1	201930	DETTOL H'S ORIGINAL 50ML بيوتل معقم اليدين الاطفي 50 مل	1.00	15.38	0.00	15	0.00	17.69
2	201930	DETTOL H'S ORIGINAL 50ML بيوتل معقم اليدين الاطفي 50 مل	1.00	15.38	15.38	15	0.00	0.00
3	100689	DIZINIL 20 TAB ديزينيل 20 قرص	1.00	9.40	0.00	0	0.00	9.40
4	100046	ADOL SINUS 24 TABLETS ادول سينوس 24 كمحول	1.00	10.90	0.00	0	0.00	10.90

Total Sold Items	4.00	عدد الاقساط المباعة
Total Discount	15.38	الخصم الاجمالي للعروض
Total Before VAT	35.68	الاجمالي قبل الضريبة
VAT	0.00	مضافة القيمة المضافة
Grand Total (SAR)	37.99	الاجمالي (ريال سعودي)



Return & Refund Policy
 Provide the original invoice to the same purchasing branch with the product in its original condition without use or any damage
 Return & Refund are available within 7 days from purchase time
 The following items cannot be returned or refunded:
 Items that require cold temperature storage such as insulin and Hormones.
 Items that require fixed storage temperature such as baby milk and food.
 Personal care products such as (shaving machines and tools, Oral care products ...etc.) unless there is a manufacturing defect within 7 days

سياسة الاسترجاع والارجاع
 لعرض الفاتورة الاصلية وقرحه لفرع الشراء على ان يكون المنتج في حاله الاصلية دون استخدام او تلف
 الاسترجاع والارجاع متاح خلال 7 ايام من تاريخ الفاتورة
 لا يمكن استرجاع او ارجاع الاقساط التالية:
 منتجات مبردة في التاج مثل الانسولين والهورمونات
 اصناف تستدعي الحفظ في درجة حرارة ثابتة مثل حليب ولبنة والعملة الاطفال
 منتجات العناية الشخصية مثل (الموزة المائدة ورافة الشعر الجوزة الحنية مسحة قدم الاطفال، وما يمثل التالي) الا في حال وجود عطل معصفي في المنتج وتلك خلال سبعة ايام

Top suspicious regions

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

1

34024609813:
P340
P340_2
يف احمد احمد علي
300544591200003

100%
CPI
Company

2

ورة ضريبية
able In

100%
CPI
Metadata

3

DETTOL
ملتي 50 مل
DIZINIL

100%
CUT
Total/payment

4

35.68
0.00
37.99

100%
CUT
Total/payment

5

ضريبية
axable

99%
CUT
Other

Approach

ResNet-18 patch classifier (128x128, 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: 936 Text-rich: 513 Flagged ≥ 0.08 : 374
- Top-k mean fraud score: 0.9976 CNN risk: HIGH Duplicate: 1.00 (exact_duplicate)
- Patch CNN flagged 374 of 513 text-rich patches (top score 1.00).
- Top 5 suspicious regions clustered around image coordinates (384,512), (768,64), (256,960), (896,1344), (704,64).
- Predicted modification mix across top regions: 3x CUT, 2x CPI.
- Predicted entity types: 2x Total/payment, 1x Company, 1x Metadata, 1x Other.
- Document is an EXACT duplicate of a file already analysed in this session (resubmission).

ZATCA QR — decoded fields & full check list

seller_name: ■■■■■■ ■■■■■■ 340
vat_number: 300544591200003
timestamp: 2026-03-17T03:18:50Z
total: 37.99
vat: 2.31

[PASS] payload decodes

Base64 + TLV well-formed; 5 tag(s) found.

[PASS] all mandatory tags present

Tags 1 (seller), 2 (VAT#), 3 (timestamp), 4 (total), 5 (VAT) all present.

[PASS] VAT number format

300544591200003 — 15 digits, starts and ends with 3.

[PASS] timestamp valid

2026-03-17T03:18:50Z (parses as ISO 8601).

[PASS] amounts numeric

Total 37.99 SAR · VAT 2.31 SAR.

[PASS] VAT \leq total

VAT amount does not exceed invoice total.

[WARN] VAT rate \approx 15%

Implied rate 6.47% deviates 8.5pp from 15%. Could be mixed-rate / exempt items — review the line items.

[WARN] seller name on receipt

'■■■■■■ ■■■■■■ 340' partially matches OCR text (token overlap 33%). Review manually.

[PASS] invoice total matches receipt

QR total 37.99 SAR appears in the receipt (closest OCR value 37.99).

[WARN] VAT amount matches receipt

QR VAT 2.31 SAR not directly found in OCR — receipts often round or summarise VAT differently. Manual review suggested.