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Using AI to identify fraudulent cryptocurrency reporting

Anti-Fraud Team | Elias Westgaard

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Agenda

- **About**
- Approach
- Findings
- Next steps and transferability
- Questions and discussion

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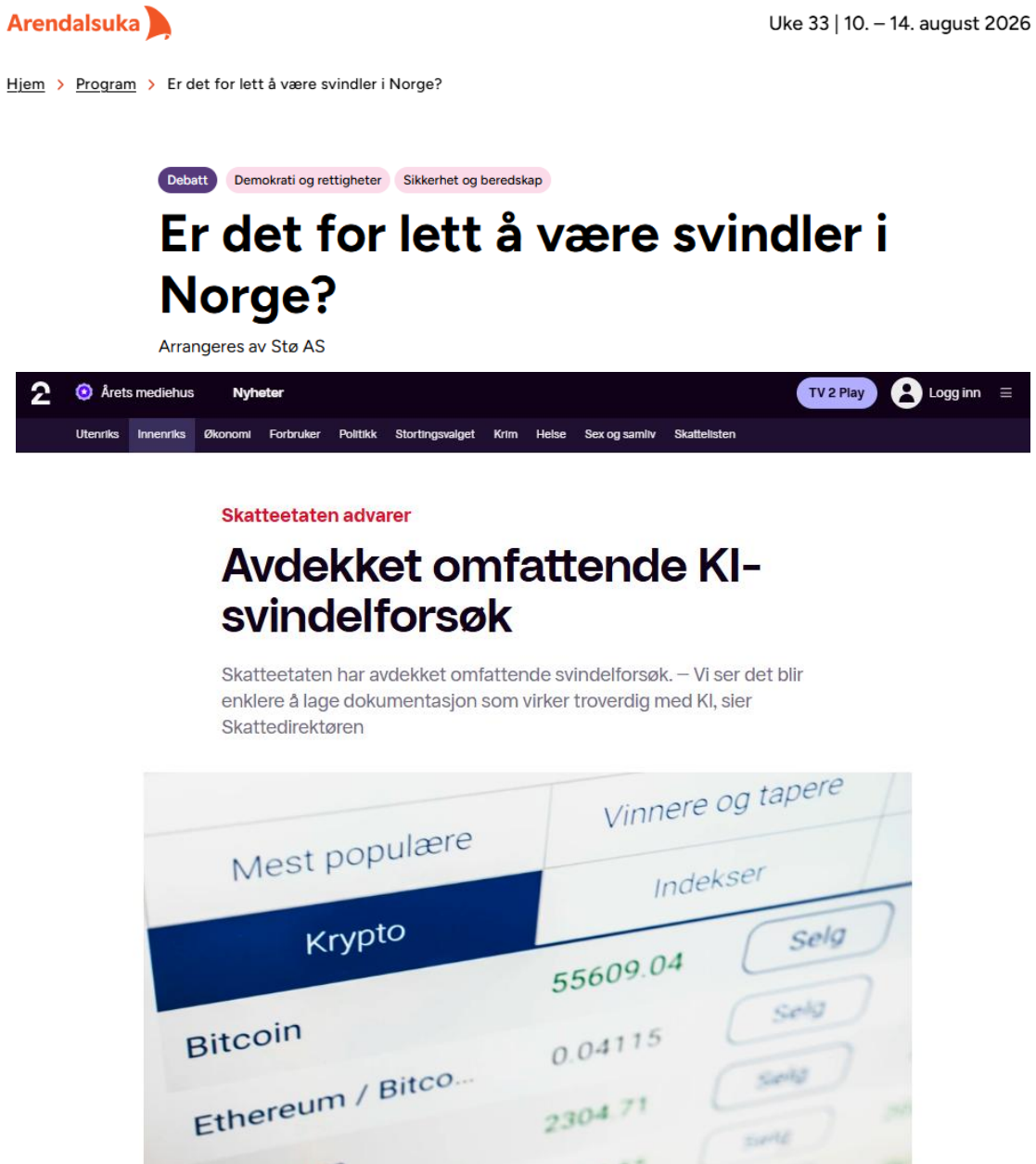
The challenge

High volume of taxpayer-submitted documents

Many people lose money when trading cryptocurrencies

Some submitted documents are fraudulent

Most documents are still reviewed manually



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Starting point

Foundation

- Exploratory analysis

Platform

- Azure Databricks
- API to OpenAI models

Data foundation

- 88,000 documents
- Tax years 2024–2025

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Overall concept

01

Ingestion

PDF, Excel, images and other formats

02

Extraction

Machine reading
+ AI extraction

03

Standardization

Content mapped into consistent tables

04

Cross-source checks

Compare the document, the tax return, third-party data and metadata

05

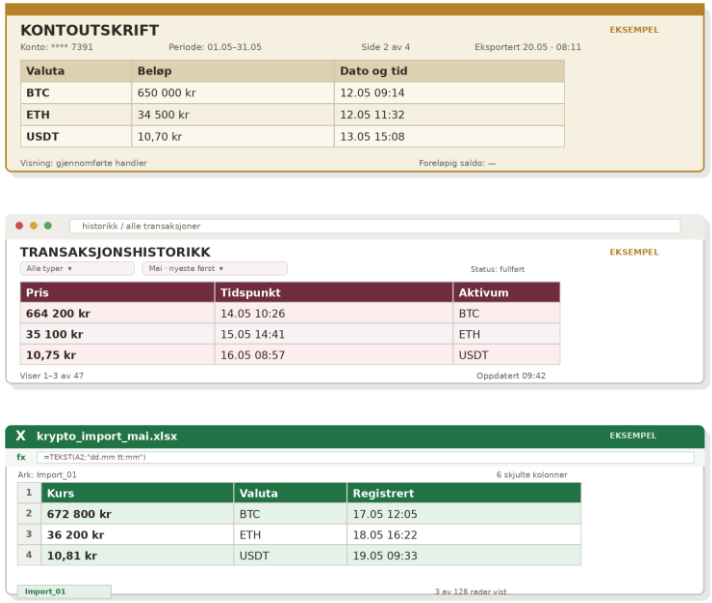
Human review

Transparent evidence for assessment

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From documents to structured data

TAXPAYER DOCUMENTS



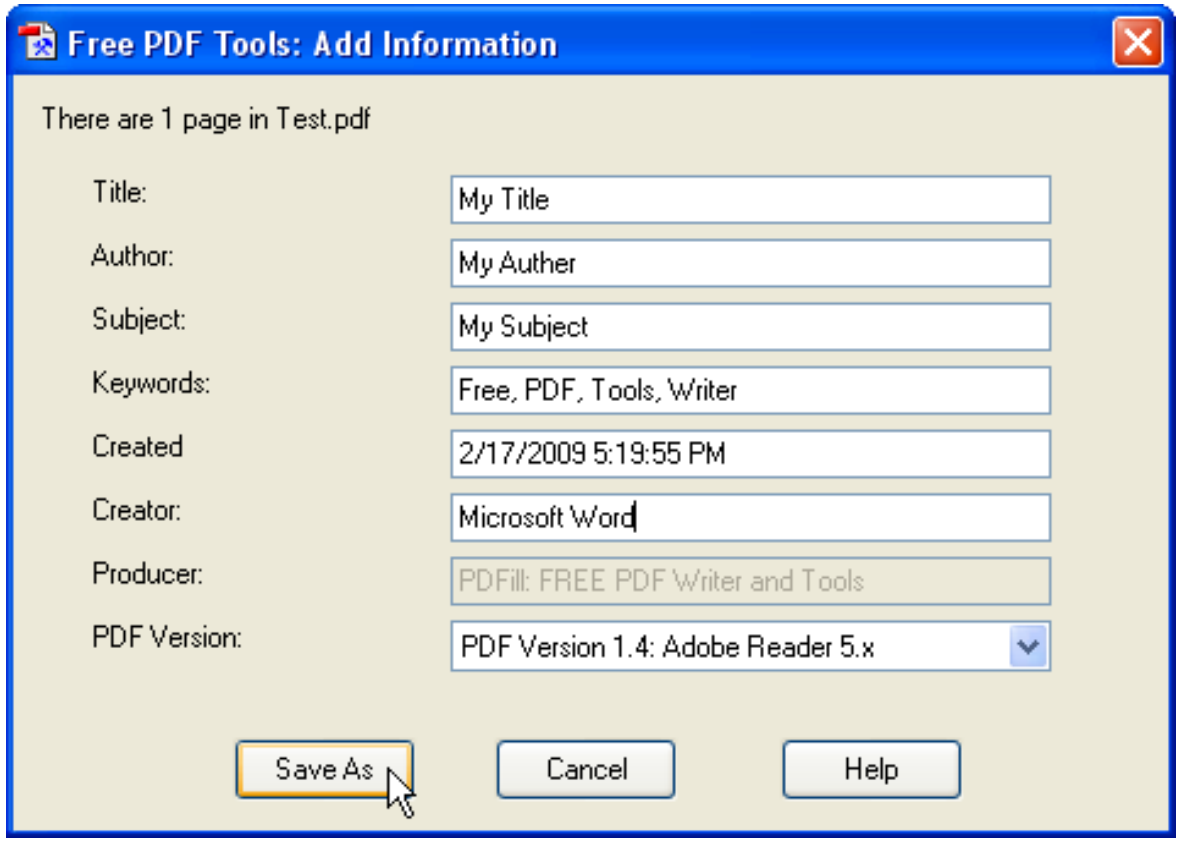
AI MODEL

TRANSACTION VIEW

Time	Currency	Price
12.05 · 09:14	BTC	650,000 NOK
12.05 · 11:32	ETH	34,500 NOK
13.05 · 15:08	USDT	10.70 NOK
14.05 · 10:26	BTC	664,200 NOK
15.05 · 14:41	ETH	35,100 NOK
16.05 · 08:57	USDT	10.75 NOK
17.05 · 12:05	BTC	672,800 NOK
18.05 · 16:22	ETH	36,200 NOK
19.05 · 09:33	USDT	10.81 NOK

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Metadata



BINANCE

Order Number: 20580809004617093120
Match Time: Jan 17, 2024, 5:34:21 AM(UTC)

Receipt Generated For:	Trade with:
FRANCIS AFAMEFUNA EZE	Afokkeoghene Akpososo
User Side: MAKER_BUYER	User Side: TAKER_SELLER

Trade Details

Crypto (COIN) traded	USDT
Fiat involved in the trade	NGN
Total Amount of Crypto	478.58
Crypto Unit Price in Fiat	1,302.68
Total Traded Amount in Fiat	623,436.59
Order Completed Date	Jan 17, 2024, 6:01:50 AM(UTC)

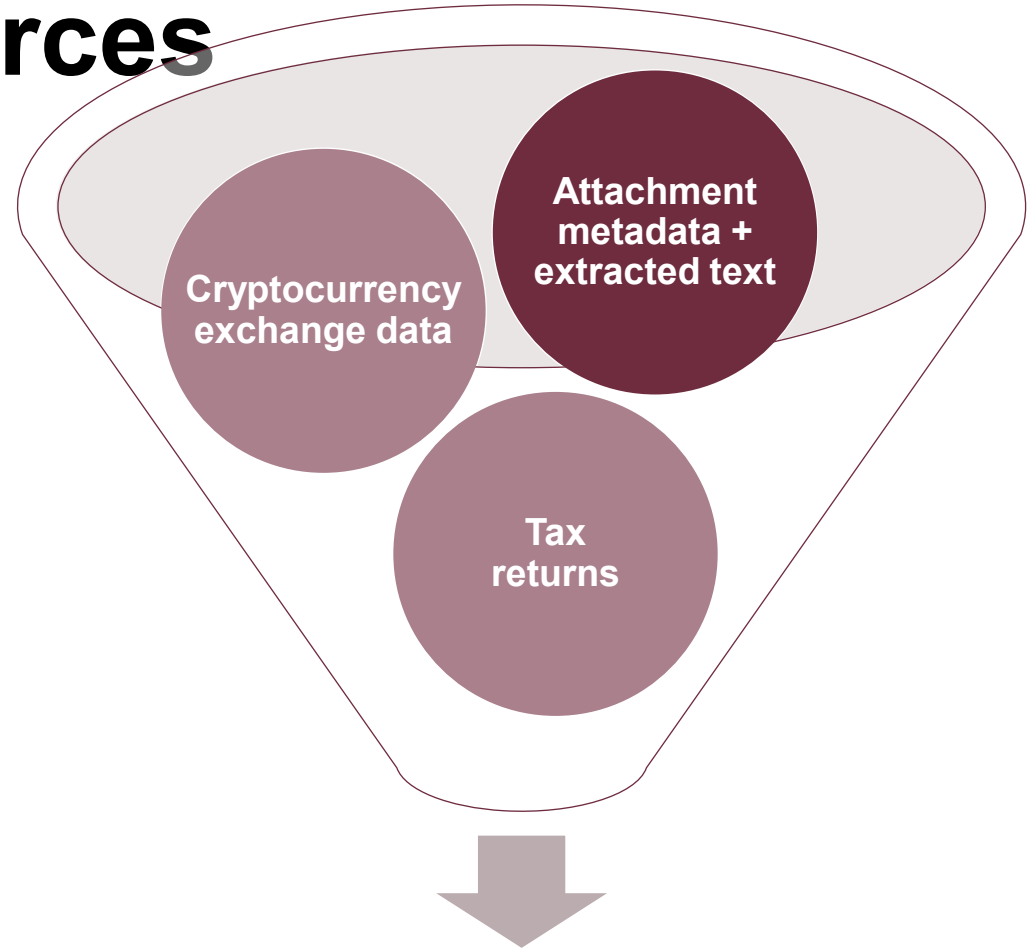
Trade Payment Details

Payment Type	Outward/Payment Made/Paid
Payment Method	Bank Transfer
Payment Details	Not Available

Digitally signed by: Binance P2P
Signature type: P2P Order Receipt
Nickname of recipient: EFA INVESTMENT
Generated Time: Mar 2, 2024, 8:00:27 AM(UTC)

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Cross-check the taxpayer's account against multiple sources



Risk indicators for potential manipulation

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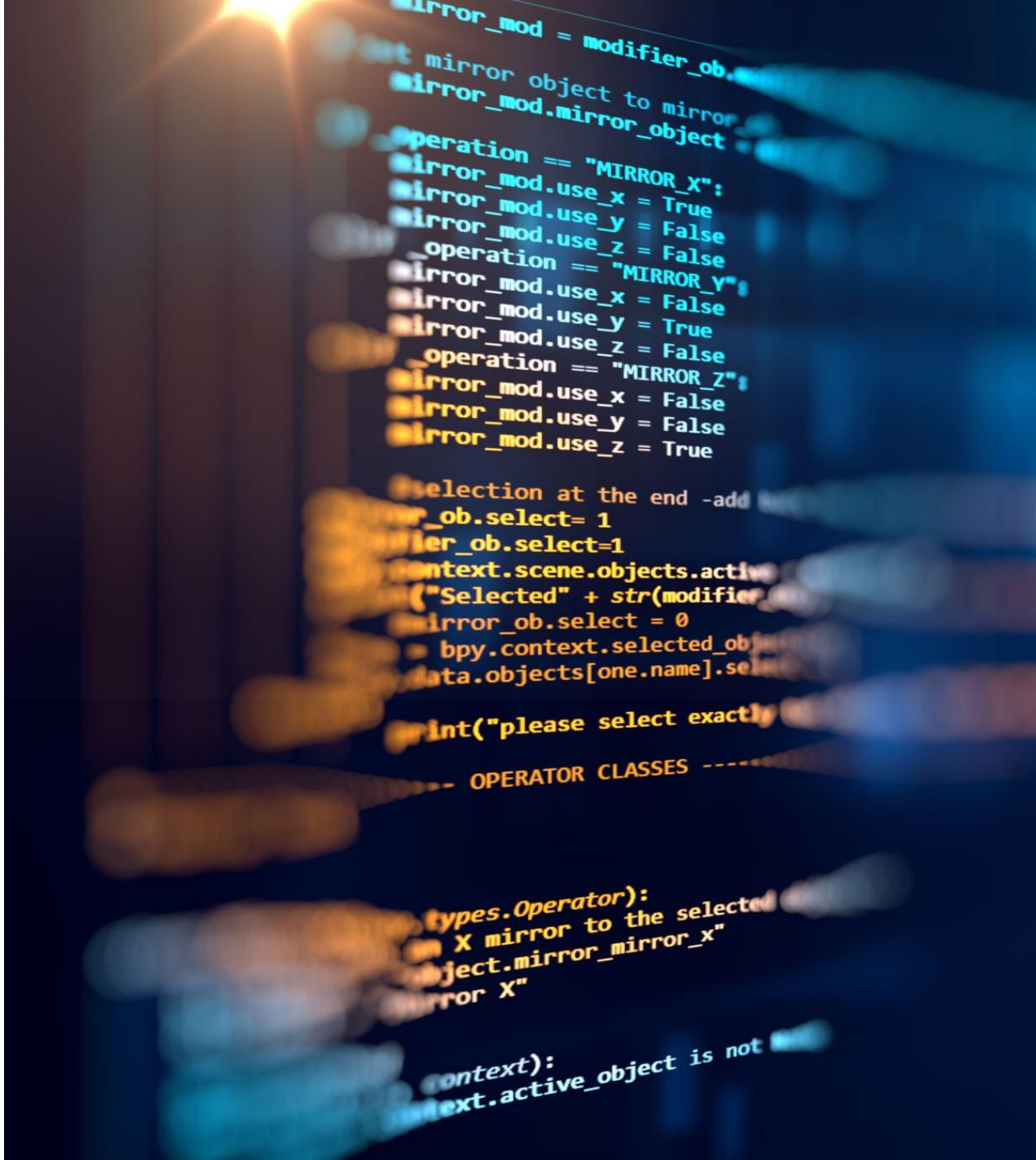
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Metadata findings

- PDFs expose the richest metadata
- The metadata indicated a possible network
- It also indicated a possible enabler



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Transaction inconsistencies are the clearest risk indicator

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AI-generated attachments

- Not inherently suspicious
- Widely used

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Transaction history

- Discrepancies were identified compared with third-party sources
- These discrepancies may indicate potential manipulation

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Tax return

- Inconsistencies were observed. but data quality is limited

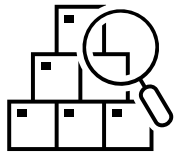
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Alternative approaches have clear limitations

Language model

Applied directly to source data

- Produced confident answers, even without evidence
- High cost



Similarity analysis

Comparison across attachments

- Nearly identical files
- Shared templates create noise

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Priorities for the next phase of analysis

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Data foundation

Link tax returns to cases and tasks
Link previous findings of fraud to our data

Crypto API
Need production-ready third-party crypto data

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Metadata

Extend metadata analysis
Compare the documents claimed sources with creator metadata

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Migration

Databricks
Move to a new region

Better AI tools

Legal approval
Current approval covers exploratory mapping only—not deployment of a production ready model

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Potential applications beyond our current scope

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Complementarity

Document transcribing and structuring can help ease the burden of reporting

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Broader document analysis

Could the approach be applied on other taxpayer documents?

- Potentially fabricated employment contracts?
- Potentially fabricated invoices? (VAT)

?

Your input

We welcome your feedback.

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