

Romanian White Collar Crime and Corporate Fraud
Conference 2019

Using technology and artificial intelligence in fraud detection and prevention

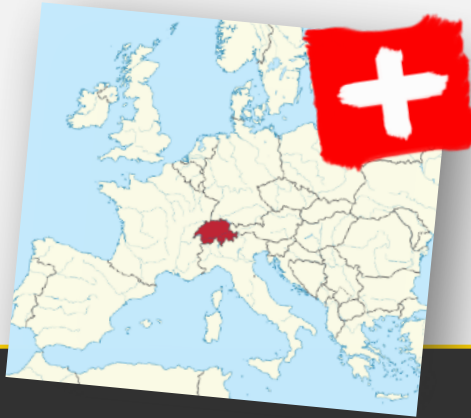
28. February 2019



Introduction Adrian Ott

EY

Forensics & Fraud Investigation

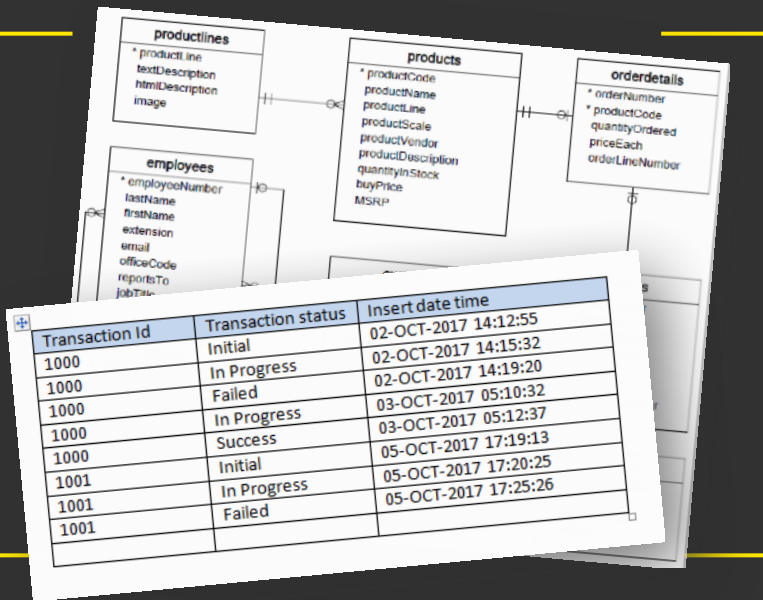


- Investigation and Compliance Assessment
- Accounting and Financial Specialists

- IT Forensic Investigations
- Cyber Attacks
- Data Analytics



Different Data-Structures



Structured Data



Unstructured Data



Unstructured Data Forensic Processing 1/2



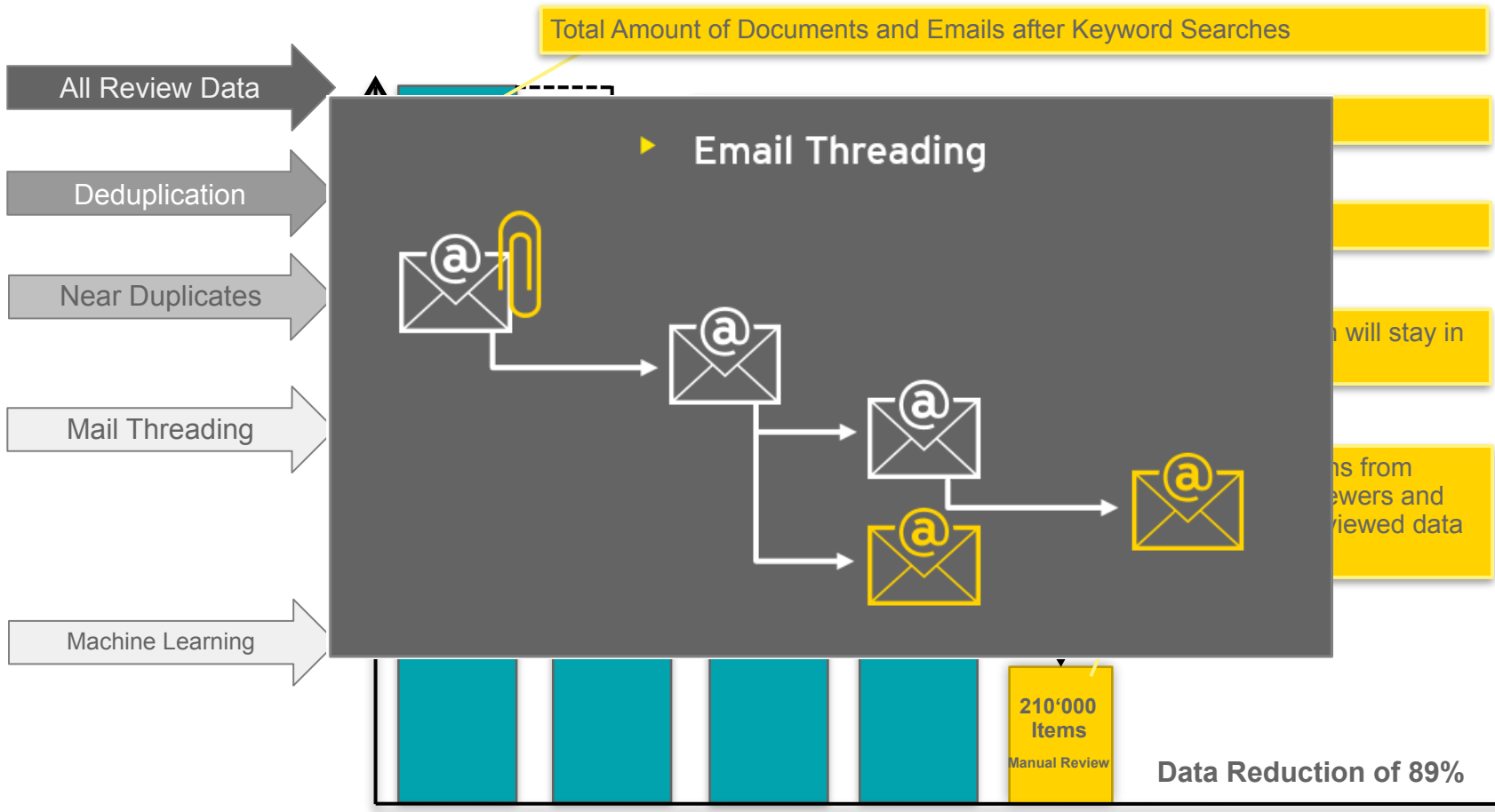
- Applying Keyword Searches

Next Step: Data Reduction

Relevant Data



Artificial Intelligence in Data Reduction





Emotive Tone Analysis





Data Extraction

B02-00000090.pdf

1 of 100

- PROJECTS
- Inbox
- Upload Manager
- Documents
- Clustering
- Workflows
- Recipes

| Document | Signer Party A | Signer Party B | Transfer Amount | Party A Text | Interest Rate | Currency | Party A Advance Lear |
|------------------|-------------------------------------|-------------------------------------|-----------------|-----------------------------------|-----------------------------------|----------|-------------------------|
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| B02-00000089.pdf | Hubert Horton | Erline Mccord | CHF 100,000 | Rantouch | Interest Rate: The 'Interest R... | CHF | Rantouch |
| D02-00000088.pdf | Arian Williamson | Melia Trojan | GDP 100,000 | Newex | Interest Rate: The 'Interest R... | GDP | Newex |
| B02-00000087.pdf | Collette Adkins | Hilary Oronby | USD 100,000 | Enise | Interest Rate: The 'Interest R... | USD | Enise |
| B02-00000086.pdf | Shahzaib Barrow | Cira Noonan | USD 100,000 | Symbic | Interest Rate: The 'Interest R... | USD | Symbic |
| D02-00000085.pdf | Louann Harbison | Louann Harbison | USD 100,000 | Zoomit | Interest Rate: The 'Interest R... | USD | Zoomit |
| B02-00000084.pdf | Garret Stewart Leith Title | Garret Stewart Leith Title | CHF 100,000 | no data point | Interest Rate: The 'Interest R... | CHF | Nexon |
| B02-00000083.pdf | Miranda Name: Alice Pfaff Title | Miranda Name: Alice Pfaff Title | CHF 100,000 | Nicky Miranda | Interest Rate: The 'Interest R... | CHF | Vorio |
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| B02-00000080.pdf | Jon-Paul Dupont Cira Noonan ... | Jon-Paul Dupont Cira Noonan ... | CHF 100,000 | no data point | Interest Rate: The 'Interest R... | EUR | UNIVERSAL BANK |
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| B02-00000076.pdf | Usamah Rubio Eduardo Hatchell | Usamah Rubio Eduardo Hatchell | USD 100,000 | Usamah Rubio | Interest Rate: The 'Interest R... | EUR | no data point |
| D02-00000075.pdf | Libbi Woodard Allie Raynes | Libbi Woodard Allie Raynes | USD 100,000 | Libbi Woodard | Interest Rate: The 'Interest R... | EUR | UNIVERSAL BANK |
| B02-00000074.pdf | Kumar Name: F-melinda | Kumar Name: F-melinda | CHF 100,000 | Ammar Kumar | Interest Rate: The 'Interest R... | EUR | UNIVERSAL BANK |
| B02-00000073.pdf | Loliani Colosimo Title | Loliani Colosimo Title | CAD 100,000 | Abbi Whittle | Interest Rate: The 'Interest R... | EUR | no data point |
| D02-00000072.pdf | Krisha Avalos Arletha Richard | Krisha Avalos Arletha Richard | USD 100,000 | no data point | Interest Rate: The 'Interest R... | EUR | no data point |
| B02-00000071.pdf | Chasr Buckner Eduardo Hatchell | Chasr Buckner Eduardo Hatchell | EUR 100,000 | ABC Street, Villershausen Ch... | Interest Rate: The 'Interest R... | EUR | UNIVERSAL BANK |
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| B02-00000066.pdf | Ayers Name: | Ayers Name: | GBP 100,000 | no data point | Interest Rate: The 'Interest R... | EUR | Scimbu UNIVERSAL BANK |
| D02-00000065.pdf | Miranda Neville Erline Mccord | Miranda Neville Erline Mccord | CHF 100,000 | no data point | Interest Rate: The 'Interest R... | EUR | UNIVERSAL BANK |
| B02-00000064.pdf | Hoatho Name: Erline Mccord | Hoatho Name: Erline Mccord | GBP 100,000 | no data point | Interest Rate: The 'Interest R... | EUR | UNIVERSAL BANK |
| B02-00000063.pdf | Fredia Voss | Fredia Voss | USD 100,000 | Equiti Fredia Voss | Interest Rate: The 'Interest R... | EUR | Equiti |

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Annex. In the event of any inconsistency between this Annex and the other provisions of this Schedule, this Annex will prevail, and in the event of any inconsistency between Paragraph 11 and the other



Different Data-Structures

Database schema diagram showing tables: products, orderdetails, and a data table.

| action status | Insert date time |
|---------------|----------------------|
| | 02-OCT-2017 14:12:55 |
| ogress | 02-OCT-2017 14:15:32 |
| d | 02-OCT-2017 14:19:20 |
| ogress | 03-OCT-2017 05:10:32 |
| cess | 03-OCT-2017 05:12:37 |
| al | 05-OCT-2017 17:19:13 |
| ogress | 05-OCT-2017 17:20:25 |
| ed | 05-OCT-2017 17:25:26 |

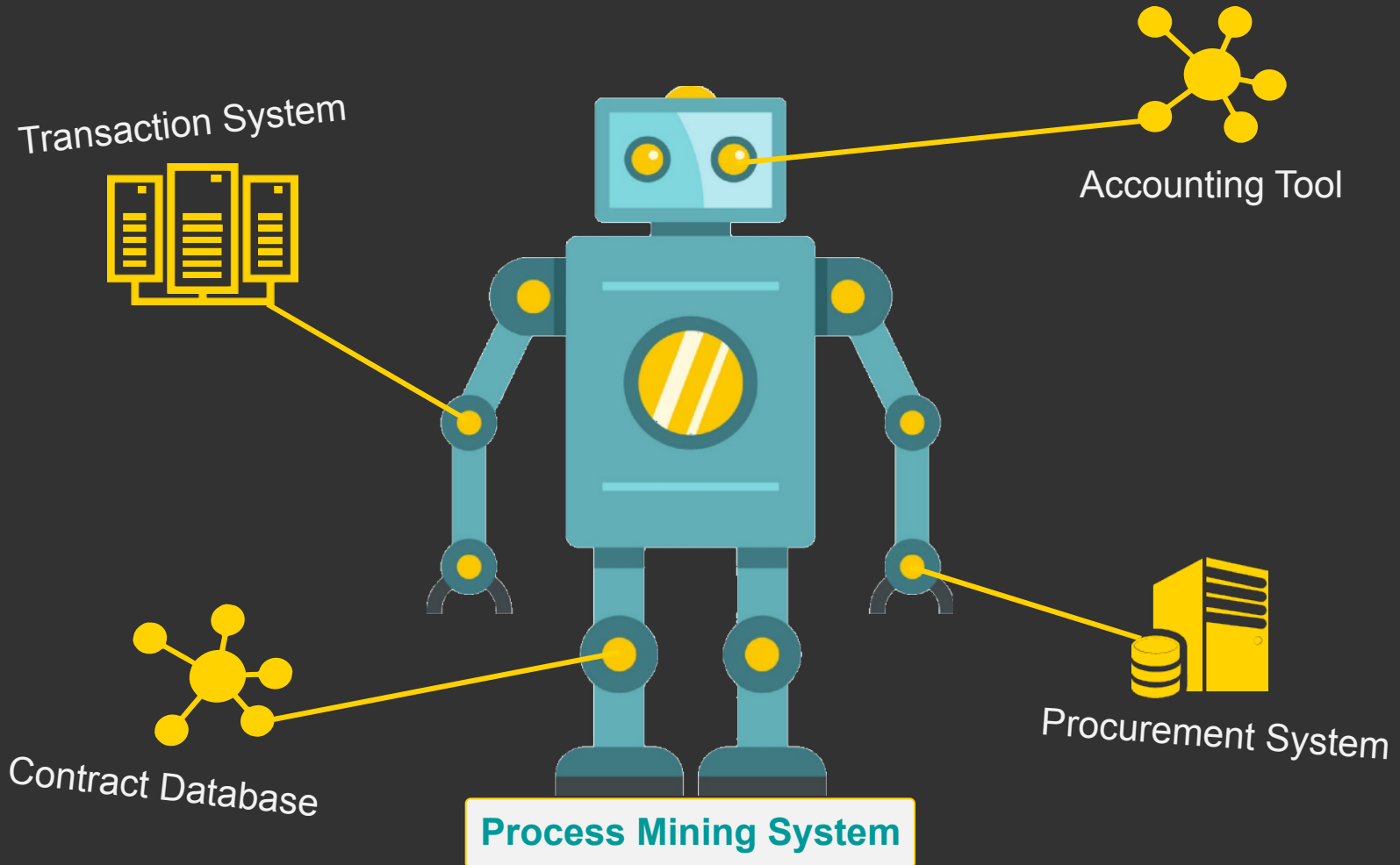
Structured Data

Icons representing unstructured data sources: Server, Laptop, Smartphones, Emails, Discs, Tools, Printer, and Cloud.

Unstructured Data



Process Mining System



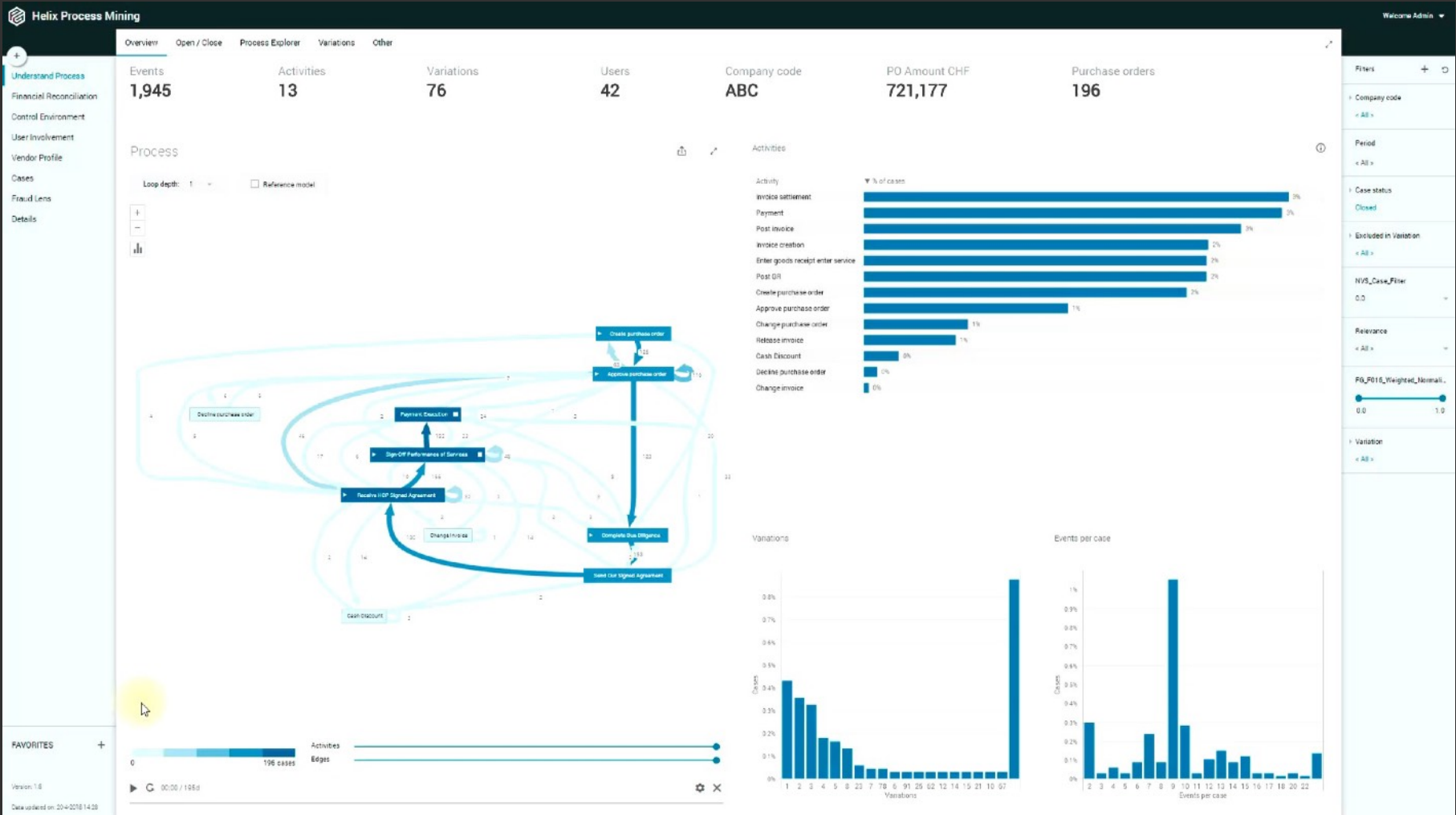


Process Mining System



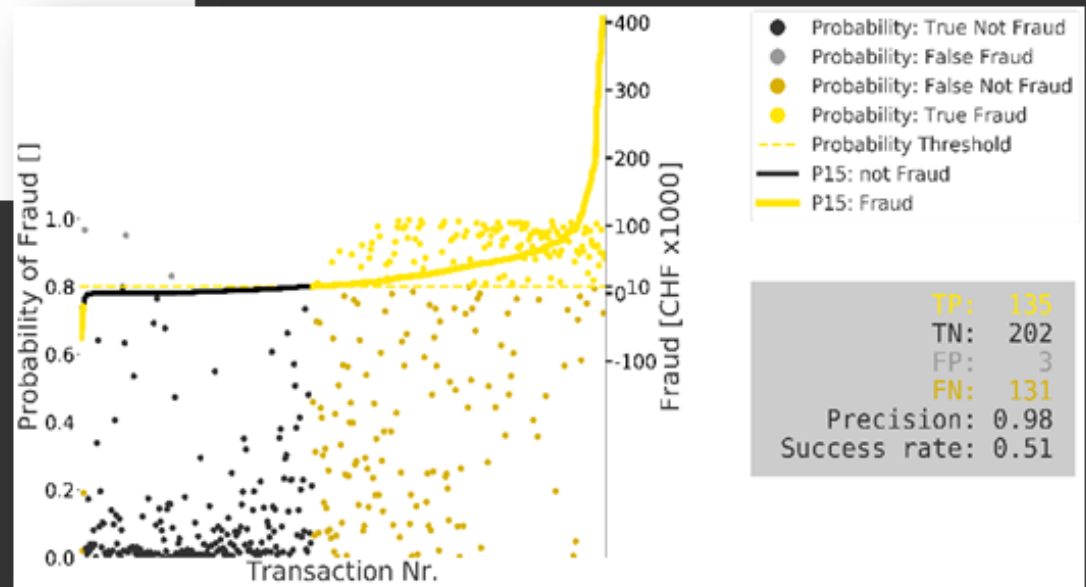
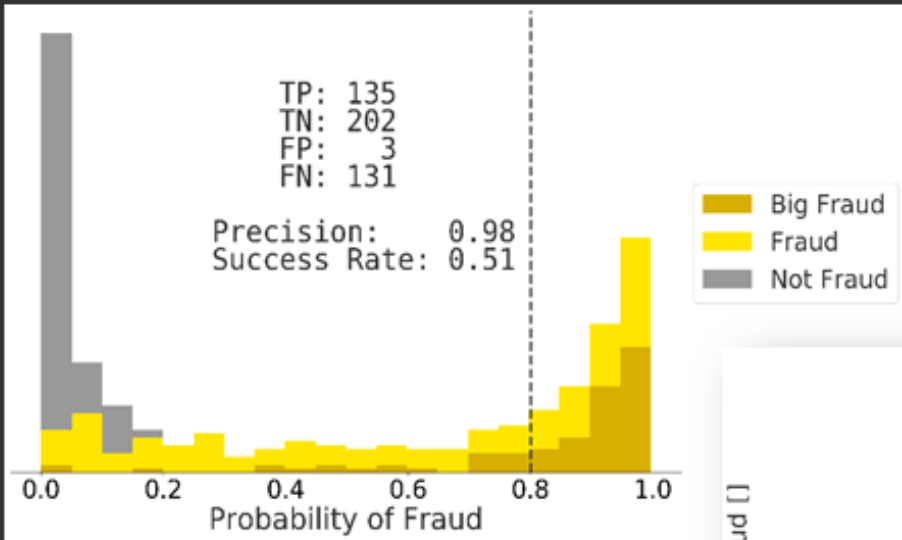


Process Mining System





Structured Data Analytics



Presented clip



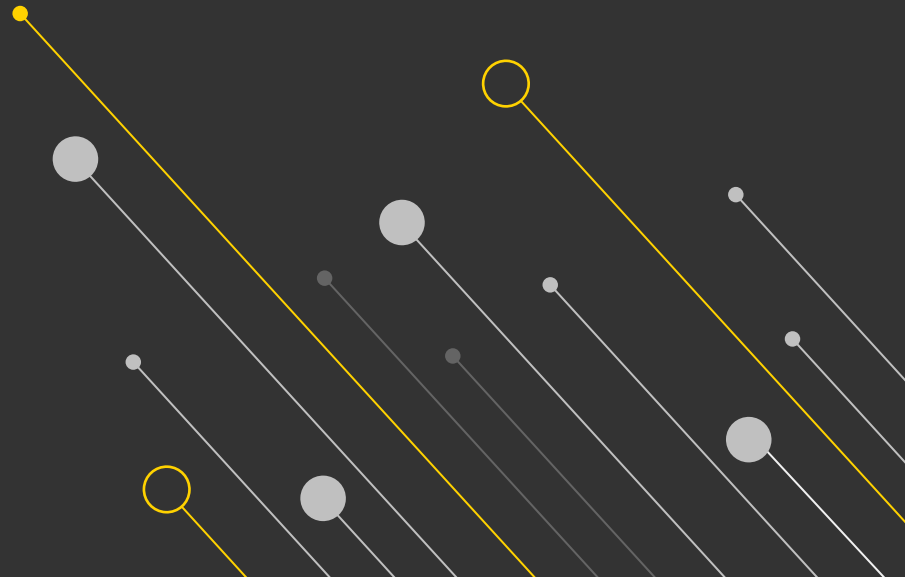
Clip reconstructed from brain activity



Q

&

A





Structured Data Analytics



Transactions with high fraud risk

A dashboard highlighting those transactions having the highest fraud risks. The dashboard can be used in a continuous monitoring fashion.



Vendor and material analytics

Designed to trace abnormal purchase price for materials, specific vendors exceeding price variance.



Unusual transactions

Follow the process paths for the unusual transactions in order to find root causes and design adequate controls.



Predict

Machine Learning algorithm predicts the potentially fraudulent transactions.



Uncompliant Transactions

Generate a report of only the high risk transactions which aren't compliant with the tests.