



FRAUD RISK MANAGEMENT

From the lens of Artificial Intelligence (AI)

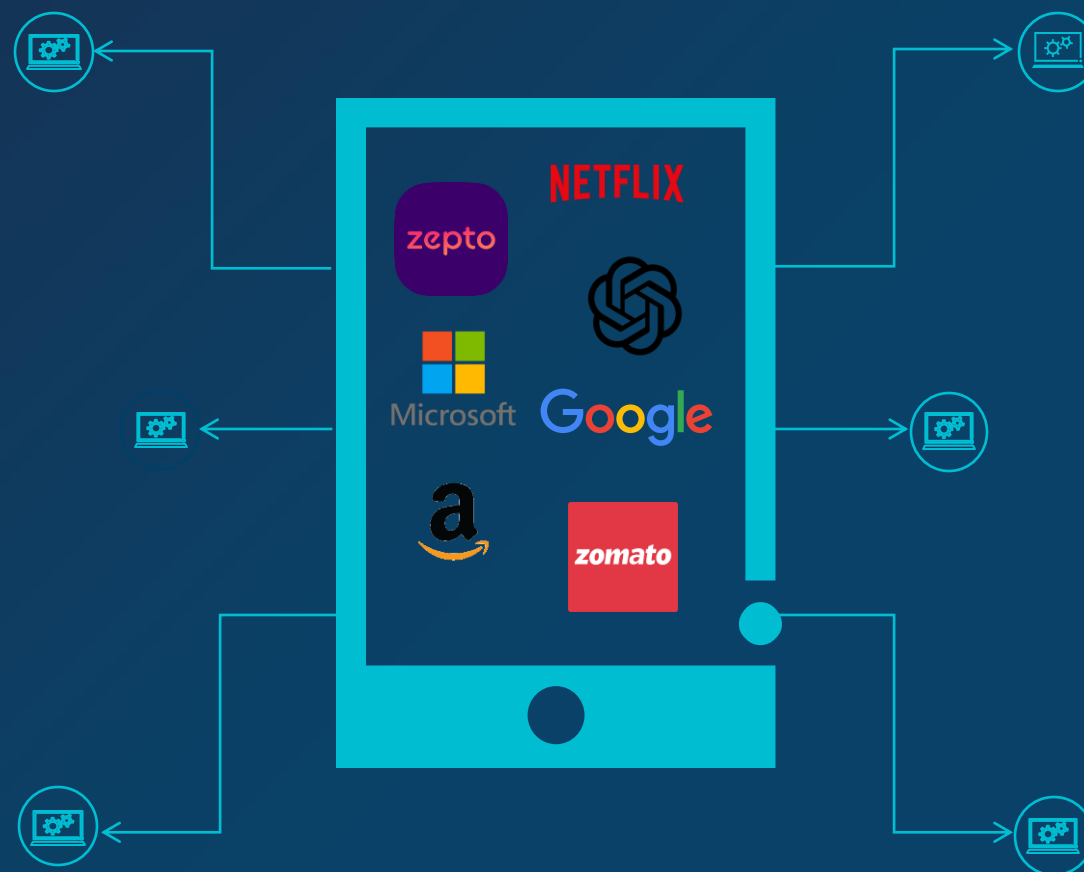
protiviti®
Global Business Consulting

Artificial Intelligence (AI) for Financial services

Artificial Intelligence (AI) refers to the simulation of human intelligence in machines, enabling them to perform tasks that typically require human cognition. These tasks include problem-solving, decision-making, natural language processing, and pattern recognition.

Generative AI refers to artificial intelligence that can create new content, such as text, images, music, or videos, based on patterns it has learned from data.

Prompt Engineering - The practice of crafting the right input (prompt) to get the best response from an AI model.



Machine learning (ML) is a subset of AI that enables machines to learn from data and improve their performance over time without explicit programming.

Large Language Models (LLMs) - Advanced AI models trained on huge amounts of text data, enabling them to understand and generate human-like text. These models power chatbots, search engines, and writing assistants.

Agentic AI refers to AI-powered agents that can independently plan, execute, and optimize tasks without constant human guidance. Unlike regular AI, which just gives answers, Agentic AI takes actions and works towards goals.

Applications of AI for Fraud Risk

AI and ML are transforming fraud risk management by enabling faster, more accurate detection and prevention of fraudulent activities. These technologies analyze vast datasets in real time, identify hidden patterns, and enhance security through predictive analytics, anomaly detection, and automated risk scoring.

Real-time Fraud Detection:

Identifying suspicious transactions using anomaly detection

Identity Verification & Authentication:

Biometric and behavioral analysis for secure customer onboarding

Insider Fraud Detection:

Monitoring employee activities to detect unauthorized access or misconduct

Credit Card Fraud Prevention:

AI-powered transaction monitoring to flag unauthorized payments



Predictive Risk Scoring:

Assessing customer risk profiles to preempt fraudulent activities

Synthetic Identity Fraud Prevention:

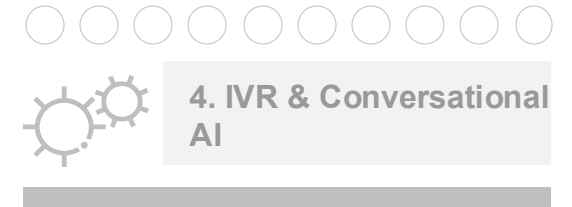
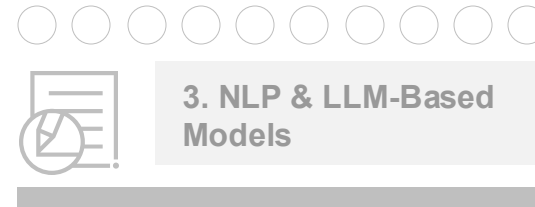
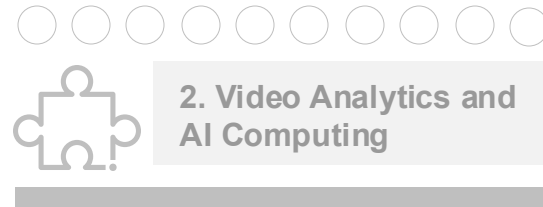
Detecting fake identities using AI-based behavioral analytics

Transaction Monitoring & Alerting:

AI-driven risk-based transaction screening to reduce false positives

By leveraging AI-driven insights, financial institutions can proactively combat fraud, reduce false positives, and strengthen regulatory compliance.

Our AI Powered Fraud Risk Solutions - Image & Document Analytics



Potential Use-cases

KYC validation

Accounts Payable validation

Employee T&E validation

HR- employee onboarding

Marketing and promotion expenses

Certificate for compliance monitoring

“ Our AI-powered analytics solution enhances document processing with precision, scalability, and fraud detection capabilities ”

Solution Capabilities

Leverage **GenAI and pixel-level informatics** for smart review of documents

Versatile processing -
Handles multiple formats

Finds discrepancies **beyond human sight**

Micro-scoping precision; can processes millions of documents overnight

Easy to ingest data from **different source system**

Our AI Powered Fraud Risk Solutions - Image & Document Analytics



1. Image & Document Analytics



2. Video Analytics and AI Computing



3. NLP & LLM-Based Models



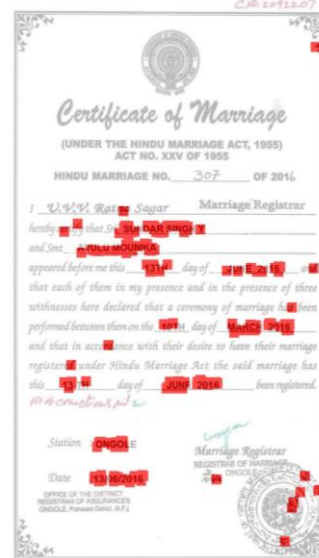
4. IVR & Conversational AI

1. Document duplicity



In this example, it shows same document submitted with a time gap of more than 4 months of each other. Same document submitted more than once with a time gap. Tool performs OCR and pixel match between the two documents to highlight the duplicity

2. Forgery



BAJAJ ALLIANZ STAFFING SOLUTIONS LIMITED			
Payroll for the month of July 2023			
Employee Code	8038475	Date of Joining	08 Dec 2022
Employee Name	ANIL K	Permanent Account Number	ASDP0716
Company	BAJAJ - OFF	State	Nagaland
Location	Gu	Ward Location	Kohima
Sub Location	Kohima	Department	Operational Operations
Grade	Operations	Employee Designation	Cashier
Bank	Junior Officer	Bank Name	State Bank of India
Bank Account Number	335922743	PF Account Number	PUPUN12730000109742
UAN Number	104804280	Esc Account Number	321071412
EMP	0	Days Worked	31
Amount Days	2	OT Hours	0
Earnings		Deductions	
Particulars	Amount	Particulars	Amount
Basic Salary	8,190.00	Professional Tax	200.00
Amount Of Basic Salary	940.00	Provident Fund	1,500.00
House Rent Allowance	3,280.00	ESIC	148.00
Amount Of House Rent Allowance	210.00	Amount PF	107.00
Personal Pay Allowance	5,150.00		
Amount Personal Pay Allowance	340.00		
Statutory Bonus	1,634.00		
Amount Statutory Bonus	100.00		
Total Earnings	19,440.00	Total Deductions	2,000.00
In words () : Seventeen Thousand Three Hundred Ninety Four Only		Net Salary : 17,390.00	

BHANU CORPORATES SERVICES									
SHOP NO.1, MAMCHAND MARKET SIKANDERPUR GURGAON 6-HARYANA									
Phone : 9871954284, 9312400043 E-Mail : bsmssand123@gmail.com									
TAX INVOICE									
GSTIN : 06AGUPA0017H1ZS									
M/s PROTIVITI INDIA MEMBER PVT.LTD, 15TH FLOOR BLDG.NO. 5A CYBER CITY 06 HARYANA GURGAON 122002 PH.NO : GSTIN : 06AADCC8092N1ZA IRN NO :					Invoice No. : BH006428 Date : 20-02-2024 PO. No. : Floor : Months Of : Transport : E-WAY BILL NO. :				
S.	Qty.	Product	HSN	Rate	CESS%	DIS	POST	cost	Amount
1	2 BOX	LATEX EXAMINATION GLOVES	40191900	350.00	0.00	0.00	6.00	6.00	70700.00
									Amount 70700.00

In this example, tool will flag if there is any forgery on the documents submitted by the user- be it a customer or an employee of the company. Tool identifies any pixels which do not match with the rest of the document and highlights it in a different colour.

The use cases could be: **KYC documents, income proofs, Employee travel claims**

Our AI Powered Fraud Risk Solutions - Image & Document Analytics



1. Image & Document Analytics



2. Video Analytics and AI Computing



3. NLP & LLM-Based Models



4. IVR & Conversational AI

3. Metadata analysis

```
ExifTool Version Number : 12.42
File Name                : uber_tamp.pdf
Directory                : F:/janjunehighlight/EXAMPLES
File Size                : 44 kB
File Modification Date/Time : 2022:09:21 12:28:58+05:30
File Access Date/Time    : 2022:09:21 12:29:12+05:30
File Creation Date/Time  : 2022:09:21 12:28:58+05:30
File Permissions         : -rw-rw-rw-
File Type                : PDF
File Type Extension      : pdf
MIME Type                : application/pdf
Linearized               : No
Title                   :
Creator                 : wkhtmltopdf 0.12.6
Producer                : 2.4.24 (4.3.13)
Create Date             : 2022:05:06 18:39:04Z
Modify Date             : 2022:08:24 07:38:50+02:00
Page Count              : 1
PDF Version             : 1.5
Has XFA                 : No
```

Metadata analysis gives the creator, difference in creation and modification date, at a scale. Within the same example of uber invoice, tool will show the difference of doc creation and modified date as well producer through which it has been modified.

4. Structure vendor invoice data for analysis

BHANU CORPORATES SERVICES
SHOP NO.1, MAMCHAND MARKET SIKANDERPUR
GURGAON 6-HARYANA
Phone : 9871954284, 9312400043
E-Mail : parmananti.250@gmail.com

TAX INVOICE
GSTIN: 06AGUPA0017H1Z5

M/s PROTIVITI INDIA MEMBER PVT.LTD.
15TH FLOOR
BLDG NO. 5A CYBER CITY 06-HARYANA
GURGAON 122002
PH.NO.:
GSTIN: 06AADCC082N1Z4
IRN NO

Invoice No.: BH006428 Date: 20-02-2024
PO No.
Floor
Months Of
Transport
E-WAY BILL NO.:

S.	Qty.	Product	HSN	Rate	CESS%	DTG	amt	Amount
1	2 BOX	LATEX EXAMINATION GLOVES	401900	350.00	0.00	0.00	0.00	700.00

Invoice Number	GST Number	Invoice Date	Mobile Number	City	Name of Company
IN/23-24/011257	33AADCC6092N1Z0	25/11/2023	02226825323	Coimbatore	Infomac IT So.
IB/23-24/3776	06AHUPJ71420228	06-02-2024	9818067403	Gurgaon	Infinity Beverages
ZAK/1547/2023-24	33AADCC1607Q1Z3	27-Feb-24	044-450 72 444, 9500 128326, 9500 0423	Chennai	Zak Decor Mart Pvt.Ltd.
Not Available	06AHZPH8842F1Z9	07/01/24	Not Entered	Gurgaon	HARI ON FILL.
BH006428	06AGUPA0017H1Z5	20-02-2024	9871954284, 9312400043	Gurgaon	BHANU CORPORA.

Convert vendor invoices from PDFs or images into a structured format, handling thousands of different layouts. Apply analytics to detect issues like
Inconsistencies in invoice sequencing
Name / address match with employee master

5. Image match



Similarity Score: 100.0%

Perform image match on objects/ humans to identify similarity

Image & Document Analytics- Demo Video



1. Image & Document Analytics



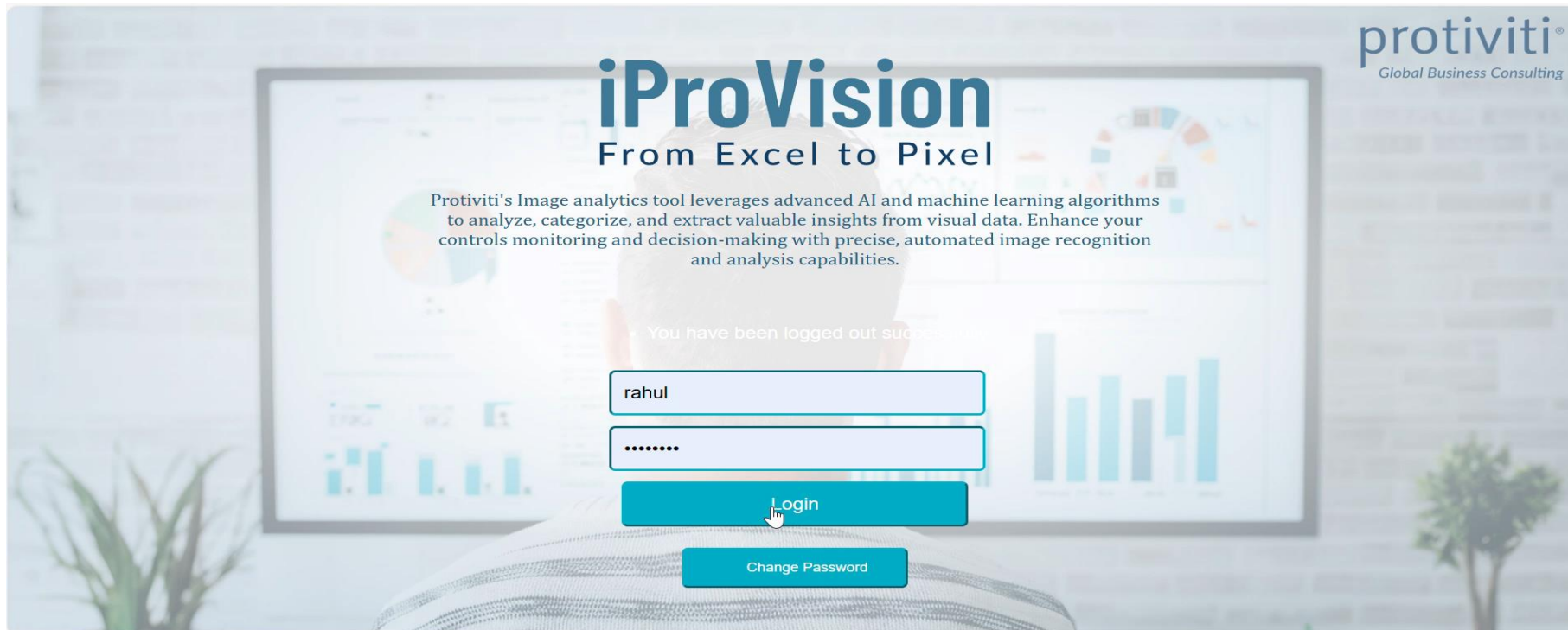
2. Video Analytics and AI Computing



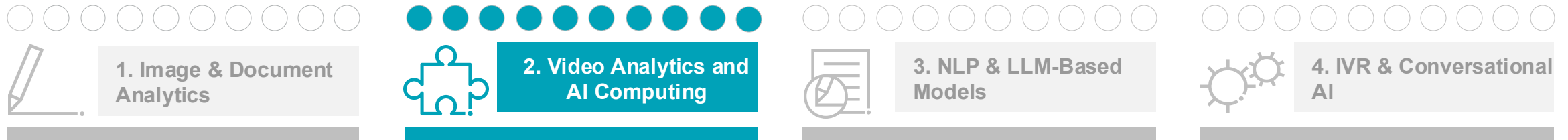
3. NLP & LLM-Based Models



4. IVR & Conversational AI



Our AI Powered Fraud Risk Solutions - Video Analytics and AI Computing



Potential Use-cases

KYC validation

Crowd concentration

Abnormal behavior at branch

Unauthorized entry into data centers

“ Advanced video analytics and AI computing solution ensures accurate insights, seamless scalability, and enhanced security for smarter decision-making. ”

Solution Capabilities

AI-Powered Insights and YOLO models – Computer Vision models to identify objects and **GenAI** to analyze patterns & detects anomalies

Seamless Integration – Connects with existing CCTV, IoT devices, and ERM systems.

Self-Learning & Adaptation by learning from new data and evolving scenarios.

Automated Alerts & Reports

Our AI Powered Fraud Risk Solutions - Video Analytics and AI Computing



1. Image & Document Analytics



2. Video Analytics and AI Computing



3. NLP & LLM-Based Models



4. IVR & Conversational AI

Capabilities Demo Video

Protiviti Face validation platform

Today's Attendance

Take Attendance

S No	Name	ID	Time
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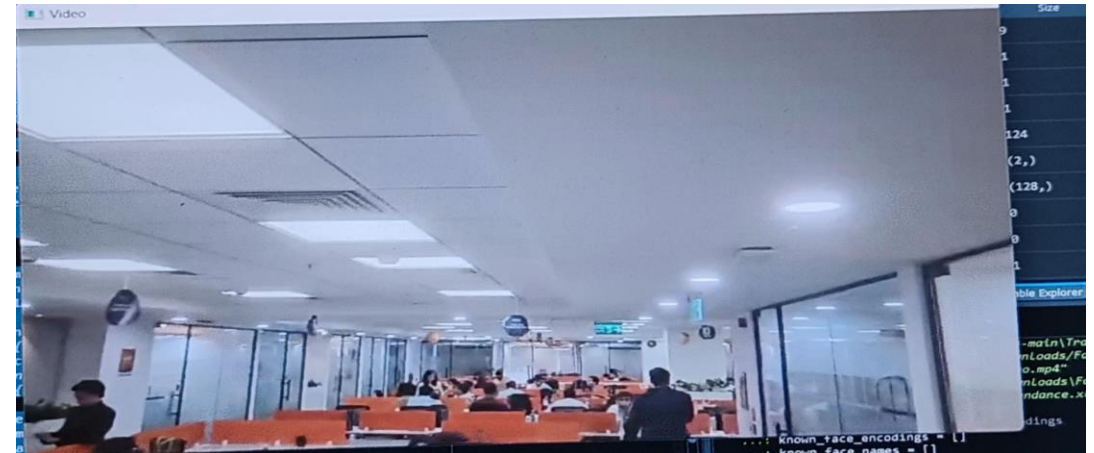
Add New User

Enter New User Name*

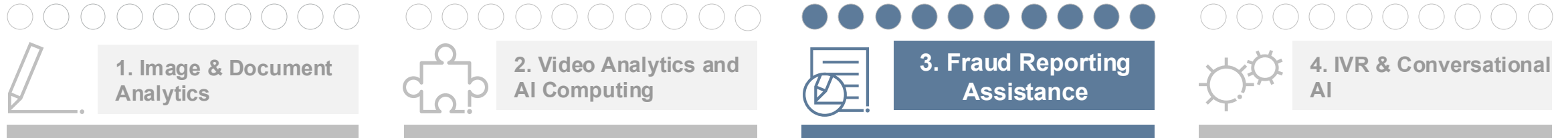
Enter New User Id*

Add New User

Total Users in Database: 1



Our AI-Powered Fraud Risk Solutions – Fraud Reporting Assistance



Potential Use-cases

Fraud Investigation Report Writing

Consistency in Language

Auto-Suggested Case Findings

Automated Summary Generation

“
AI-powered language models streamline fraud investigations, helping examiners write accurate and consistent reports.
”

Solution Capabilities

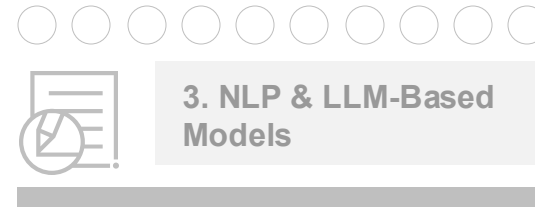
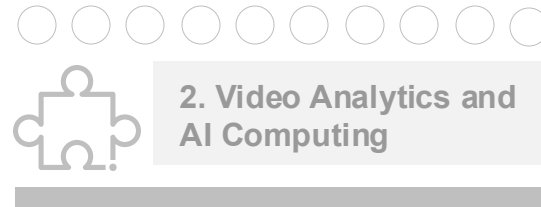
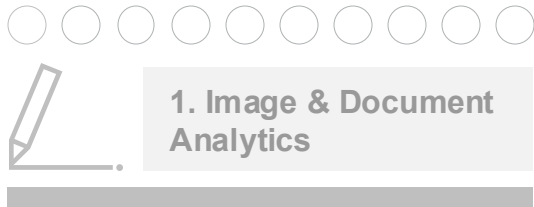
Leverage NLP and LLM models to assist fraud examiners in writing investigation reports

Standardized language prompts ensure uniformity based on thousands of past cases.

Context-aware AI suggestions improve report accuracy and reduce manual effort.

Scalable and adaptive processing enhances fraud detection and case management.

Our AI-Powered Fraud Risk Solutions – IVR & Conversational AI



Potential Use-cases

Fraud Verification Calls

KYC & Risk Assessment Interviews

Customer Claim Investigations

Automated Follow-Ups

“

Our AI-driven solutions enhance fraud investigations through interactive customer engagement.

”

Solution Capabilities

AI-driven IVR bots conduct automated fraud investigations via two-way communication.

Text-to-speech and speech-to-text capabilities enable natural and seamless interactions.

Automated workflows ensure systematic execution of assigned tasks.

Closed/open-ended questioning improves fraud detection and response efficiency.



Q&A

Face the Future with Confidence[®]