AInfinity

Enterprise AI Solutions for Financial Services

Raj Muppala

CEO & Founder

Company Overview

Intelligent AI Solutions

Cognitive Process Automation

High Performance Computing

Our Niche

Our AI Platform delivers advanced AI Solutions for complex business processes.

Advanced Scalable AI applications

Fraud Detection, Risk Predictive Models, NLP

Expertise

Financial Services

Business applications

Operational Risk & Efficiency, Predictive Models, Anomaly Detection.

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Strategic Partners

DDN AI · BIG DATA · HPC

magic

PYRAMID ANALYTICS

AInfinity Lab – To help businesses explore AI proof of Value quickly with our integrated secured platform

denodo

InteDelta Risk Management Consultants

ADVANTECH

Our platform is secured and cloud deployable and can be used in any verticals.

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Why AI now?

"These days, organizations with no AI strategy are like businesses in 2000 that had no Internet strategy, or those in 2010 that had no mobile strategy. And yet, for many organizations, AI is still uncharted territory." - Forbes

AI Is best suited to optimize value, as traditional Rule-based systems, linear models are not sufficient to handle critical use-cases :

- Fraud Detection
- Risk management
- Customer 360-degree view (Sentiment analysis, Churn etc.,)

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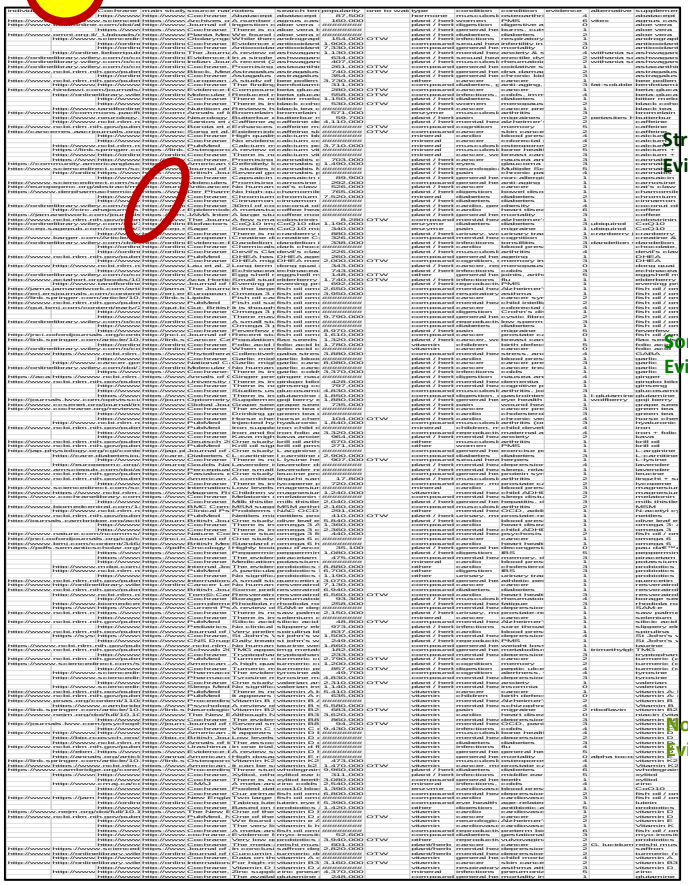
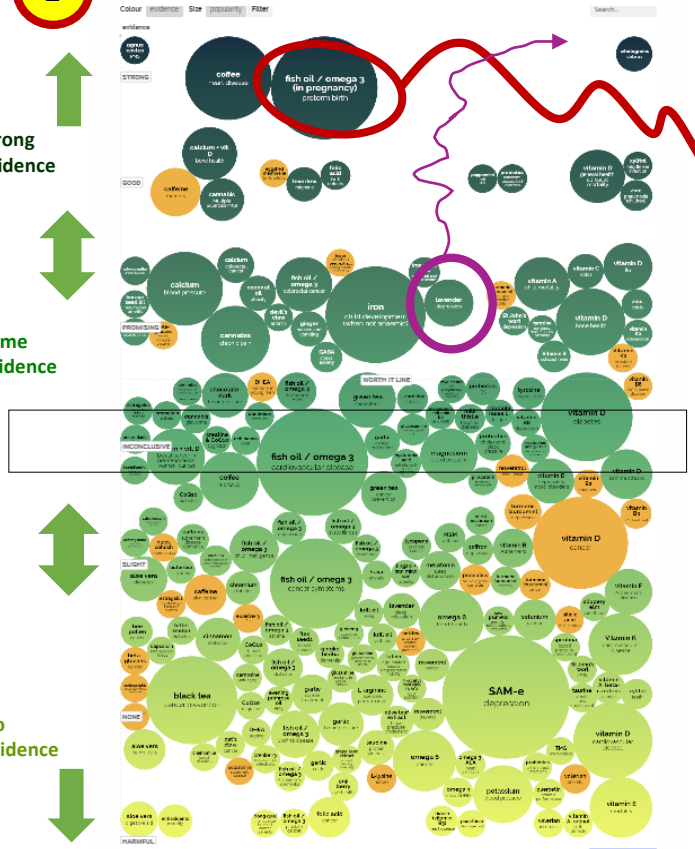
AI's advanced insights for decision making

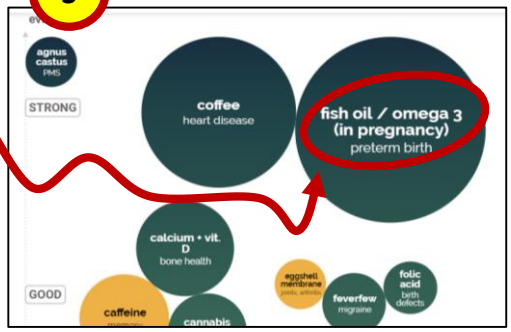
1 (200 lines x 15 Rows = 3000 data points)



2 Visualization (Colour, Size, Position)



3 'AI Insights (Classification)



4 Real-time Insights

"For Decision making..."

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Challenge to Implement AI

An emerging capability – Needs expertise to implement

Many Business applications in AI, but needs **expertise** to implement AI

- Assessment of AI capability to fit, and identification of scope, outputs

AI applications needs **skilled resources** and integrated platform

- Time and resources. Scalability and Integration with IT applications (cloud platform)

A Secured Platform (data integration, AI model build, analytics)

- So how exactly, can you implement AI in cost-effective way and increase ROI?

How you do an AI assessment BEFORE making a case for investment?

- Need an assessment with a PoV quickly and build a scalable AI application

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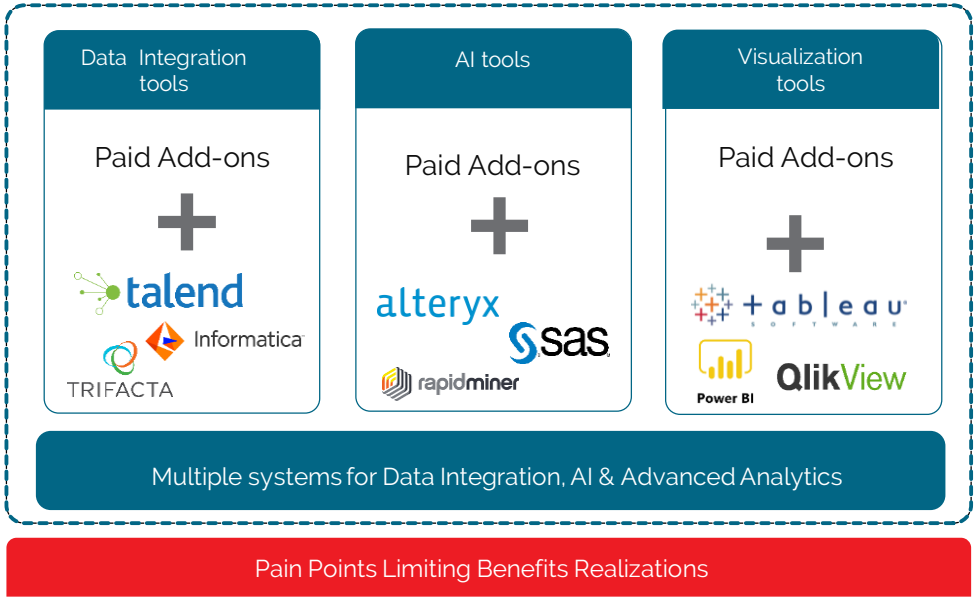
Various IT Software to build AI Solutions

- Data Integration, AI tools, Analytics tools

Multiple IT tools and processes for each needs – Difficult to build a good AI application



- Slow Implementations due to multiple sylo systems
- Limited Data Democratization
- No real-time integration for AI models build
- Expensive Licenses and exerts for each tool

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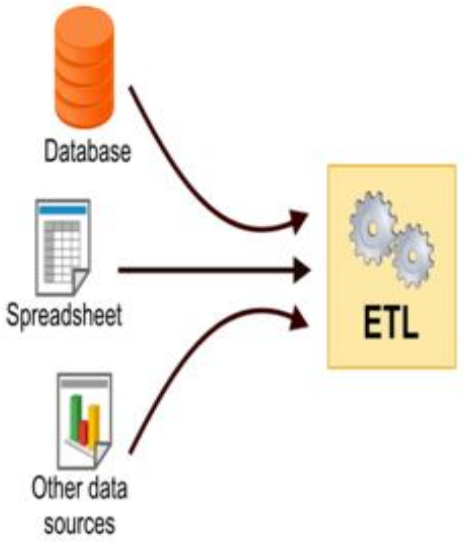
Typical Process - To build AI Solutions

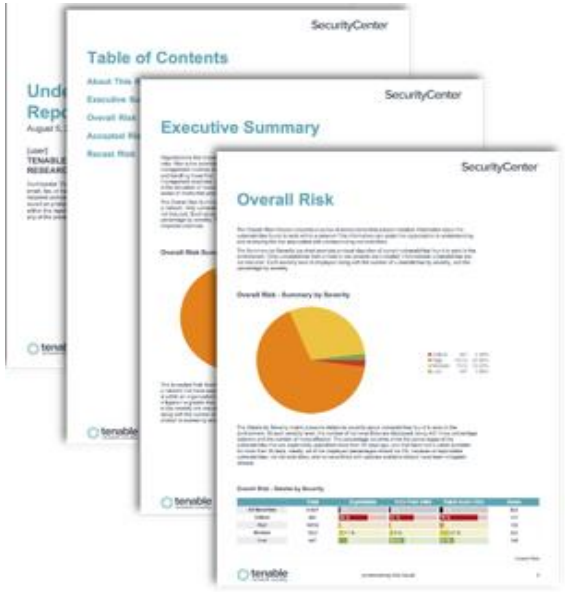
Several disintegrated tools and processes – Takes Long time and expensive to build good AI Solutions

Data Preparation



AI Model

Result output



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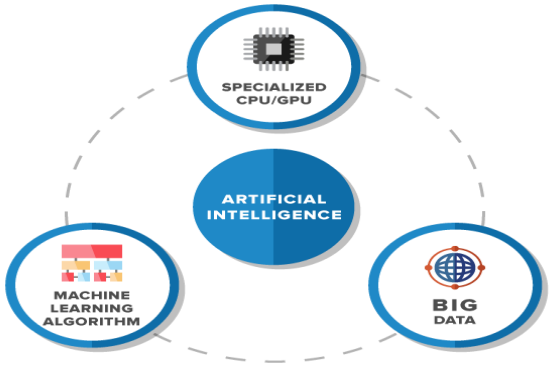
AI for Business Users – Secured end-to-end AI Platform

Advanced AI models with Real-time dashboards

Our Secured Platform is easy-to-use with built-in functionalities (even without AI expertise) to build AI solutions quickly

Powerful AI Models



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Advanced analysis Dashboards

Real-time decision making

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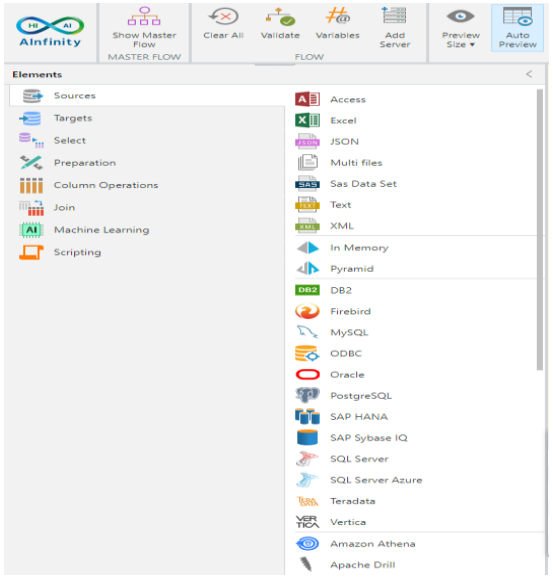
Our Unified end-to-end AI Platform

Examples of Built-in Functionalities for data, AI and dashboards

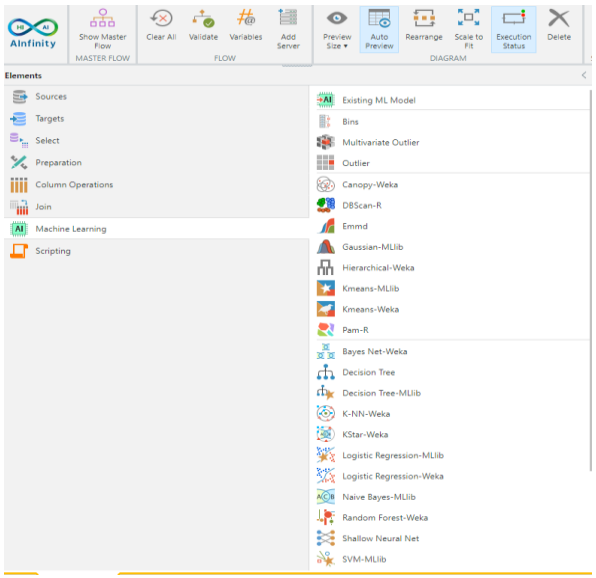
Our Secured Platform is easy-to-use, with seamless integration of :

- Data Integration (100+ connectors for structured, unstructured data)
- Built-in AI Models (Machine Learning, Deep Learning)
- Advanced dashboards (with top-end visualizations)

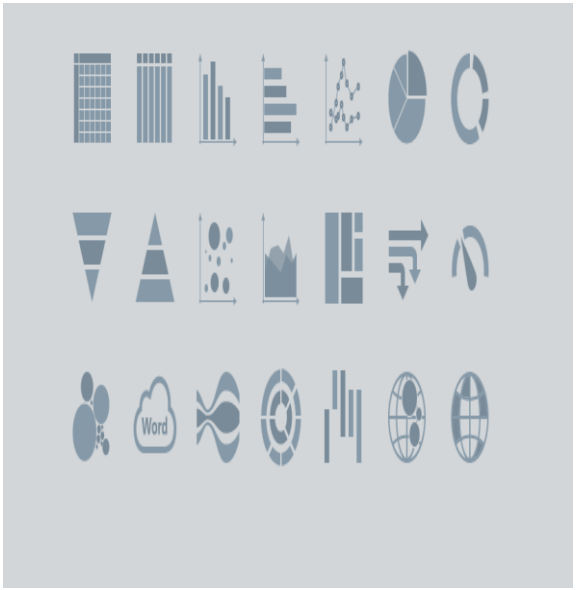
Data Integration (40+ connectors)



Built-in AI Algorithms (50+)



Advanced analysis Dashboards



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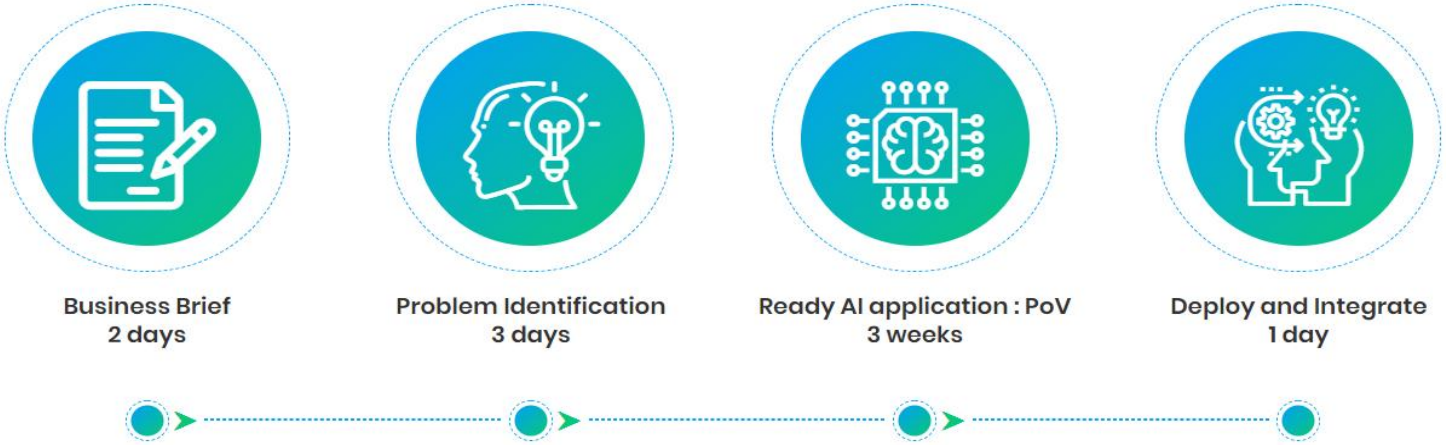
Our Niche – Faster Enterprise AI solutions

Faster success outcome in 3 months vs. years (typical)

We deliver proven results with our expertise and advanced AI solutions in weeks than years:

- Assessment and AI strategy to optimise value and processes - increase ROI
- Efficient AI solutions to address key issues – an application, not just a PoC
- Scalable solution to drive your Innovation – less disruption



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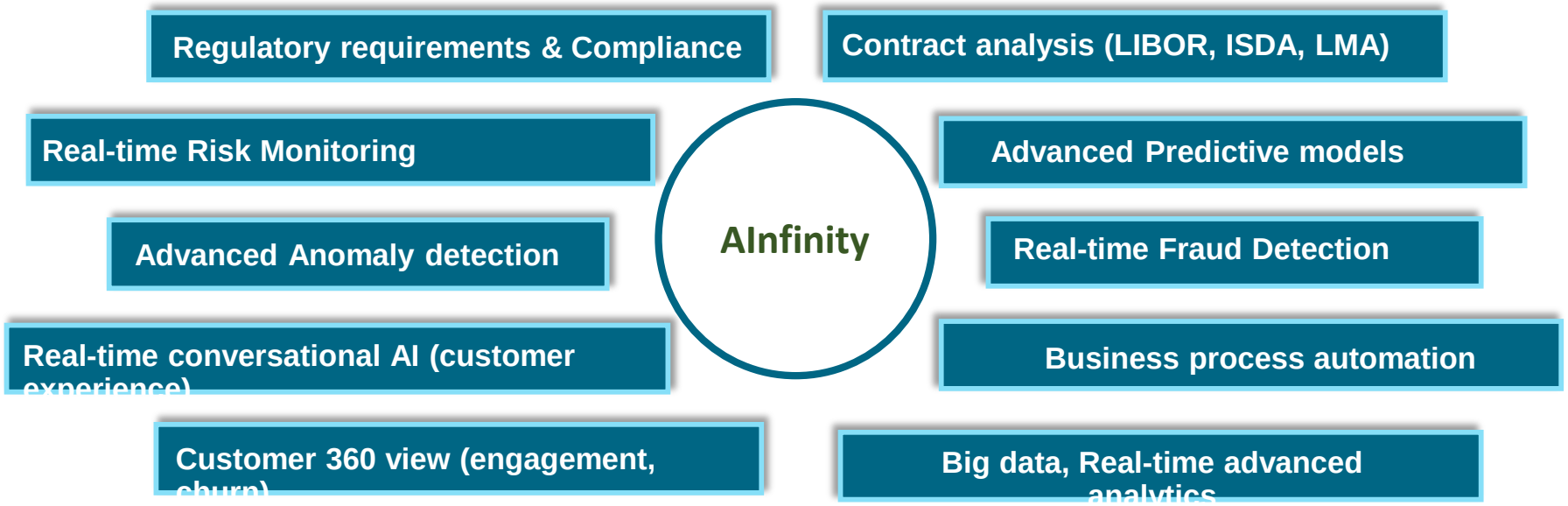
Our Advanced AI Solutions in Financial Services

A few of our advanced AI solutions for critical use-cases in Financial Services



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AInfinity LaB

The fastest and secured way to build AI solutions

Discovery to Delivery In 4 Weeks

AInfinity LaB Benefits vs. Standard Process

Delivery in Less time(4 weeks) and low-cost (60% cheaper)

Typical Approach

- **Steps and Process**: Many processes done in silo's.
  - Validate the use case
  - Integrate data
  - Trail and error of AI tools to fit
  - Visualization tools
  - Integration ….
- **Environment**: Various systems, costly licenses
- **Skills** : Data Scientists, Data Engineers, cloud/dev-ops engineers..
- **Cost** : >$100-200k (min. 3xstaff, licenses)
- **Time** : 6 months to 1 year

Our Practical Approach

- **Steps and Process**: Our experts will work with you to explore opportunities in your data
  - Validate the use case
  - Integrated data and AI platform
  - Proof of Value in 4 weeks.
- **Environment**: One unified secured platform
- **Skills** : All skilled resources from us
- **Cost** : 60-80% cheaper
- **Time**: 4 weeks

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AInfinity LaB for AI Proof of Value – Benefits

Assessment to AI Solution in 4 weeks

Low cost, fixed fee service

Secure data environment

Easy to use, integrated platform to learn and experiment

AI strategy and roadmap to fit for your business

Ready-to-use AI models (Predictions, classifications etc)

Expert AI application processes and support

Quick PoV delivery in 4-6 weeks

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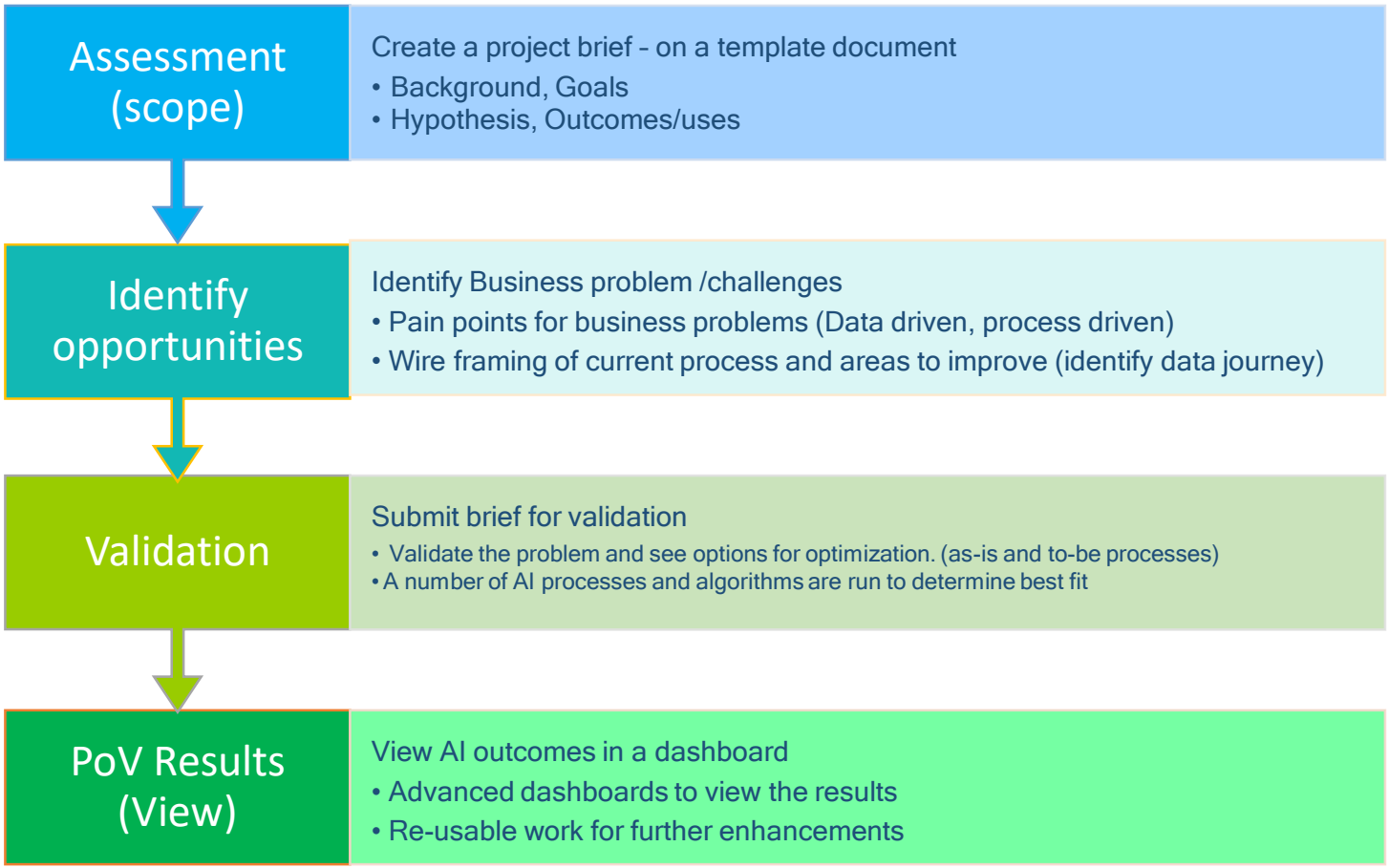
Process – Faster outcome

We will help you with AI solutions quickly



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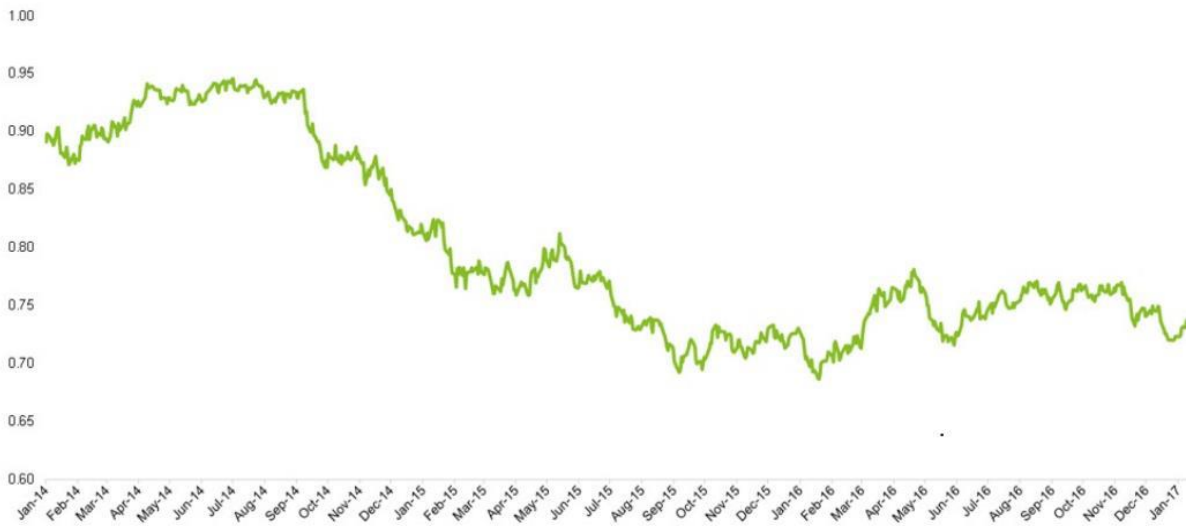
CASE STUDIES

FINANCIAL SERVICES

(CASH EQUITY TRADES, CONTRACT ANALYSIS WITH ADVANCED AI SOLUTIONS)

Top Tier Bank A
Cash equity trades – Real-time AI anomaly detection



- Holistic automation and **Detect anomalies in** the cash equity processes
- Optimize workflow and **identify trades position in real-time.**
- **Cost Savings of 30% opex costs/year,** and automation.

Problem: Most Financial institutions have challenges in cash equity trade processes to automate business processes and real-time predictive models.

Solution: We delivered an advanced solution with an integrated in-memory solution to:

- Real-time tracking of the cash equity trades
- Predict and detect anomalies in the risk portfolio.

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DEMO

FINANCIAL SERVICES

Real-time Credit Card Fraud Detection, Powered by AI

Credit Card Fraud Detection – Big Problem

On a global scale, Credit card processing fraud has hit $32.320 trillion in total

Online fraudulent transactions are predicted to **reach $25.6 billion** by 2020.

- E-Retail (65% of fraud by 2020 valued at $16.6 billion);
- **Banking** (27% valued at $6.9 billion);
- Airline ticketing (6% – $1.5 billion).

Source: Juniper Research

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Credit Card Fraud Detection – Our Solution
Advanced AI model with Real-time Intuitive dashboards

Current Scenario

- Large data, from multiple sources
- Multiple parameters to visualise
- No visibility of finding fraudulent transactions correctly

Our Optimized Solution

- Real-time Pipeline for integrating various data
- Advanced AI model to find the accurate predictions on fraud.
- Real-time analytical dashboard powered by AI model, to identify fraudulent transactions

Problem: Most Financial institutions have challenges to automate business processes to have real-time Fraud detection models.

Solution: We delivered an advanced AI solution with a real-time dashboard for analysis:

- Predict and detect outliers (considering various parameters).
- Advanced dashboard to visualize results in real-time

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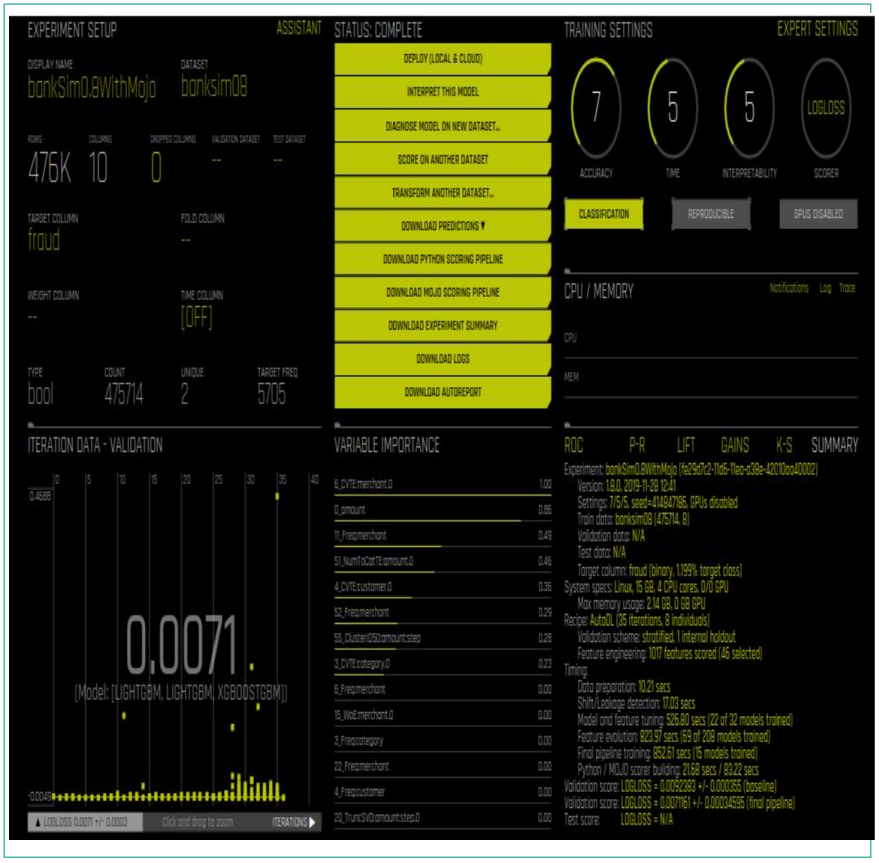
Data set to AI model Generation in 8 hours

Data set (590000 records)

	# step	A customer	A age	A gender	A zipcode...	A merchant	A zipMer...	A category	# amount
1	0	'C1093826151'	'4'	'M'	'28007'	'M4803460'	'28007'	'es_transportation'	4.55
2	0	'C352981007'	'2'	'M'	'28007'	'M4803460'	'28007'	'es_transportation'	39.68
3	0	'C2054744914'	'4'	'F'	'28007'	'M1823072687'	'28007'	'es_transportation'	26.89
4	0	'C1760612790'	'3'	'M'	'28007'	'M4803460'	'28007'	'es_transportation'	17.25
5	0	'C757503768'	'5'	'M'	'28007'	'M4803460'	'28007'	'es_transportation'	35.72
6	0	'C1315400589'	'3'	'F'	'28007'	'M4803460'	'28007'	'es_transportation'	25.81
7	0	'C765155274'	'1'	'F'	'28007'	'M4803460'	'28007'	'es_transportation'	9.1
8	0	'C2025512368'	'4'	'F'	'28007'	'M4803460'	'28007'	'es_transportation'	21.17
9	0	'C1058451774'	'3'	'M'	'28007'	'M4803460'	'28007'	'es_transportation'	32.4

- Data Feature engineering
- Optimized AI model

AI Model run-time Generation



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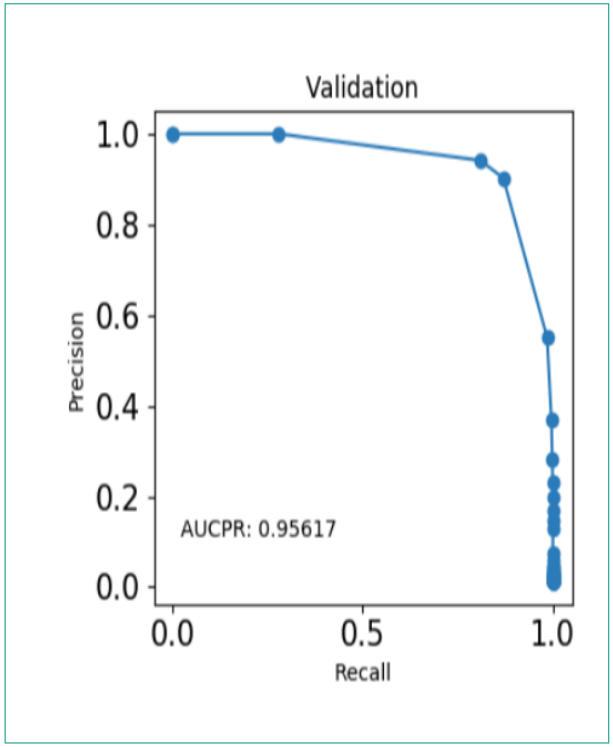
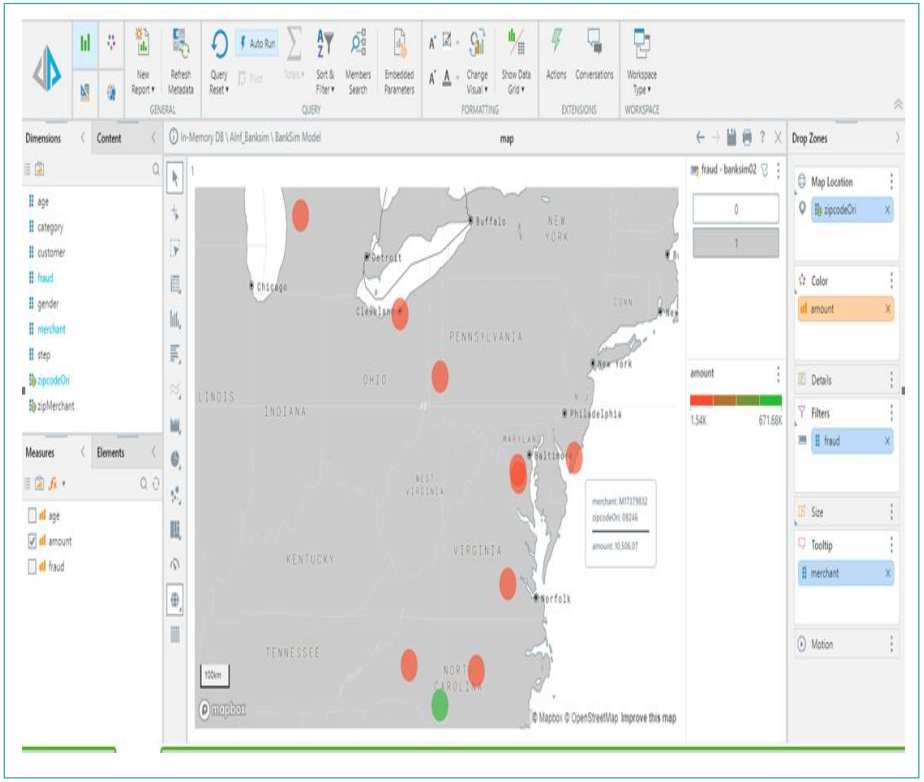
AI Model with Real-time Dashboard

Advanced AI Model (with recall of 87%)



Real-time Dashboard



Benefits: Real-time dashboard identifies fraudulent transactions for analysis:

- heatmap (by zipcode, age, city etc.,)
- Prioritize the fraud metrics

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Results

Our AI Model has a **Precision Recall at 87.49%** to optimize the fraud detection:

- Volume of Transactions: 590000 transactions
- Period : 2 days

Actual Class	Predicted Class	
	Fraudulent	Genuine
Reliable (True Positive at 89%)	1.21%	98.79%
	7139	582861

Here's how much money that actually stands for:

- The total value of all identified fraudulent transactions was $**59,928 for 2 days**.
- That's almost $**1 million per month** in total savings! (assuming that the fraud levels remain the same)

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Cost Savings

Current Scenario

Recurring costs : $144k/year
Or,
$12k/month

- Ongoing : 320 man-days/month
- Manual/Rule-based
- Current Costs: $10000/month ($30/hour. 2 analysts, 4 weeks)

Other Overheads: $2000

Our Optimized Solution

One-time costs: $40k

- Implementation time: 4 weeks
- Real-time predictive model
- Costs incl. License : $40000

Saving : 72% ($104k/year)

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Thank you !

Come visit us at stand P19

- ✓ See Live Demo on Fraud Detection
- ✓ Experience **AInfinity LaB**
- ✓ Schedule A free consulting session

Do you want to implement AI Faster and at a low-cost ?

- ➢ **Ask for a free consultation today !**

Products@Ainfinity.co

Raj Muppala– CEO & founder

Raj@AInfinity.co

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We deliver Enterprise AI solutions

Contact us for your opportunities, we make your AI journey easier and deliver AI applications in the shortest time

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1 East Poultry Avenue, London. EC1A 9PT

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