

# IBM z16 and AI

## SOLVING ANTI MONEY LAUNDERING

### Highlights



- Achieve low latency inferencing with first-in-industry IBM z16™ integrated accelerator



- Achieve high throughput while analyzing real-time transactions with IBM z16 on chip AI accelerator



- Identify money laundering patterns without the need to deploy complex software

Anti-money laundering (AML) efforts consist of laws, regulations and procedures which are designed to prevent criminals from exchanging money obtained through illegal activities—i.e., “dirty money”—into legitimate income, or “clean money.” While money laundering is an international crime, many rules are local, and they can sometimes conflict with federal policies, making it very difficult for financial institutions to remain compliant with rules and regulations. Some banks have even decided to suspend services in countries that make it hard to stay compliant or have a reputation for facilitating money laundering.

Using AI applications running on IBM z16, not only identify various money laundering patterns but also prevent them from happening in real-time.

## Detect patterns easily

The screenshot shows a web interface for managing AI models. It includes sections for 'View Settings' (with a retraining interval dropdown), 'View Subsets' (with a list of columns and an 'Add Column' button), 'View History' (with a table of model runs), and 'Column Configuration' (with a table of columns and their types).

NAME	PRIORITY	TYPE
ADVISOR_ID	High	key
RANK_18	High	numeric
RANK_17	High	numeric
NAME	High	categorical
FIRM	High	categorical
LOCATION	High	categorical
CUSTOMER_INDIVIDUAL	High	categorical

- Explainable AI – Understand why the models flag fraudulent transactions or account with SQL Data Insights
- Simplicity – Identify patterns with simple SQL knowledge and without the need for Data Scientists
- Federated Learning – Share AI models not data with other entities to improve model accuracy and enhance data privacy

- Train anywhere deploy on IBM z16 – Train the model on Public Clouds, Private clouds, On-Premises but deploy them on IBM z16 platform
- Enterprise-ready AI model deployment- Operationalize models within transactional applications to enable real-time insight. Choose from several scoring approaches, including RESTful APIs, Java™ and CICS® integration, optimized for the highest performance.

The screenshot shows a SQL query being executed in a mobile application. The query is: `select name, advisor_id, advisor_phone, advisor_email, location, proximityRecord('WEALTH_MGMT', 'advisor_id', advisor_id, ?) as similarity from wealth_mgmt.advisors where proximityRecord('WEALTH_MGMT', 'advisor_id', advisor_id, ?) > 0 order by similarity desc fetch first 3 rows only`. The results show a high similarity match for Philip Dodson in Houston, TX.

```

wealth_mgmt.advisors
where
lower(trim(name)) like ?

Parameter resolved to "Matthew Miller"

One advisor matching Matthew Miller found, returning to Siri

Finding an advisor similar to Matthew Miller (id: 1000)

select
name,
advisor_id,
advisor_phone,
advisor_email,
location,
proximityRecord('WEALTH_MGMT', 'advisor_id', advisor_id, ?) as similarity
from
wealth_mgmt.advisors
where
proximityRecord('WEALTH_MGMT', 'advisor_id', advisor_id, ?) > 0
order by
similarity desc
fetch first 3 rows only

Parameters resolved to ['1000', '1000']

Found 3 advisors: Philip Dodson, Mark Wilkins, Gregory Marcus
  
```

## Advantages

-  Flexible and scalable platform to deploy fraud models and data
-  Score all transactions and leave none behind yet meet all stringent SLAs
-  Detect laundering, adapt more dynamically to all types of Money laundering and deter laundering in real-time
-  Data Privacy and Compliance across Geographies by sharing and improving on AI models rather than Data



SQL Data Insights

Non-realtime solution



Realttime solution



IBM Watson<sup>®</sup>  
Machine Learning  
for z/OS<sup>®</sup>



IBM  
SnapML

### Db2<sup>®</sup> for z/OS SQL Data Insights

Find patterns across various data using semantic, similarity, analogy and dissimilarity queries

### AI on IBM z16 AML solution

Identifies various AML scenarios including scatter gather problem

Anti Money  
laundering on  
IBM z16

### Scikit learn/ SnapML

Train models anywhere including IBM z16

### Watson Machine Learning for z/OS

Deploy AML model trained anywhere on IBM z16 for inference

Want to know more? Contact [aionz@us.ibm.com](mailto:aionz@us.ibm.com)

**Disclaimers:** Cited by a third-party industry analyst.

AI on IBM z16 supports PyTorch, TensorFlow, Keras, Anaconda, Spark, and others