

IDUG

2026

Sydney | March 16 - 18

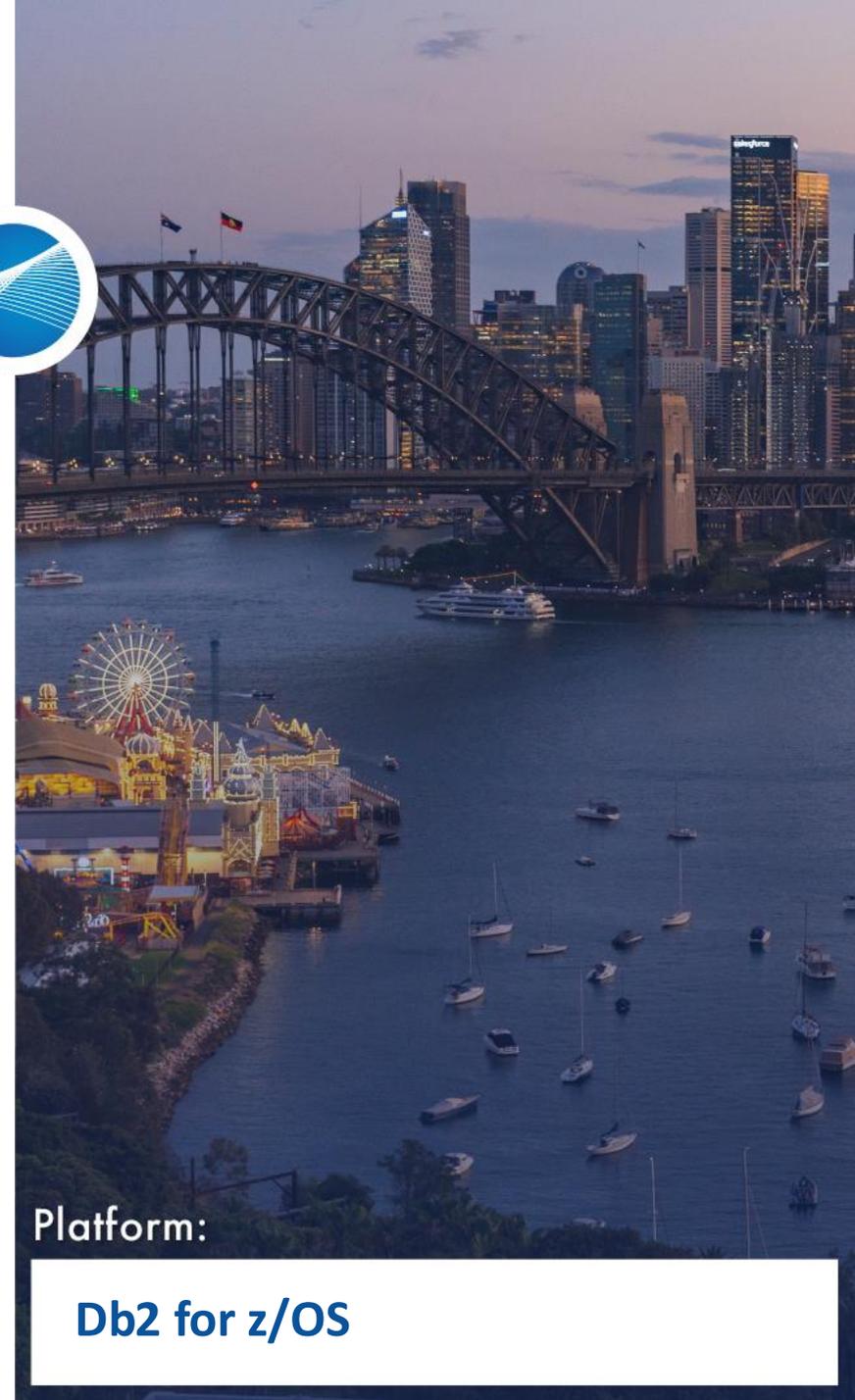
# AU Db2 TECH CONFERENCE

SQL Data Insights: Past, Present, and Future  
A Deep Dive into New Capabilities

Jae Lee, IBM

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Session Code: A05



Platform:

Db2 for z/OS

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# AGENDA

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- Introduction to SQL Data Insights
- Major Enhancements
- SQL Data Insights vNext
- Use-case on Insurance Company

# What is SQL Data Insights?

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- AI-powered downloadable feature of Db2 13 to let you exploit your business data through semantic AI functions
- Builds an unsupervised, Large Database Model against the Db2 data, to answer business questions
  - No data move necessary
- Integrates AI within any Db2 application via SQL
  - Semantic AI-built in functions
  - No data scientist required
- Leverage IBM Z AI functions (zAIU on Telum I and II) and zIIP enabled

# What Questions Can you ask with SQL Data Insights?

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## Traditional SQL

- Find customers with the same attributes
- Which transactions match fraud rules
- List products in the same category
- Identify transactions outside predefined threshold

Exact match conditions that may require complex SQL

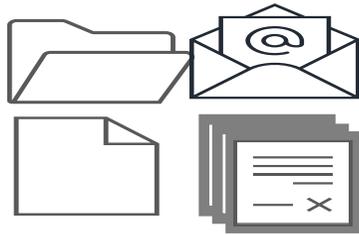
## SQL Data Insights

- Find customers similar to this customer
- Which transactions look similar to a fraudulent transaction
- Discover products similar to this product
- Which transactions are outliers

SQL Data Insights: Similarity search using AI models

## Large Language Models (LLMs)

generated using **text data**



Unstructured data (emails, blogs, tweets, PDFs...)

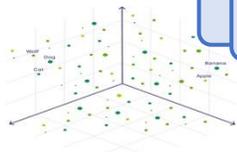
Chunks

LLM

- OpenAI's GPT-4
- Google's Gemini, PaLM, BERT
- Meta's LLaMA
- IBM's Granite

Generate embedding per chunk

Sentence Embeddings



What snack is like Oreo?

## Large Database Models (LDMs)

generated using multi-modal **relational data**

Key

CODE	PRODUCT_NAME	BRANDS	ENERGY_100G	FAT_100G	SUGARS_100G	PROTEIN_100G	SODIUM_100G
16087	Organic Salted Nut Mix	Grizzlies	2540.0	57.14	3.57	17.86	0.482
16124	Organic Muesli	Daddy's Muesli	1833.0	18.75	15.62	14.06	0.055
16872	Zen Party Mix	Sunridge	2230.0	36.67	3.33	16.67	0.633
18012	Cinnamon Nut Granola	Grizzlies	1824.0	18.18	21.82	14.55	0.009
18050	Organic Hazelnuts	Grizzlies	2632.0	60.71	3.57	14.29	0.004
18227	Organic Oat Groats	Pcc	1096.0	5.95	2.38	16.67	0.01

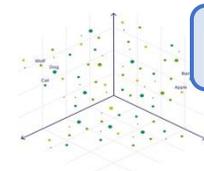
Numeric

Categorical

Structured relational data

Textification and clustering

Code\_16087 Product\_name\_Organic Salted Nut Mix  
Brands\_Grizzlies Energy\_100G\_c7 Fat\_100G\_C4 ...



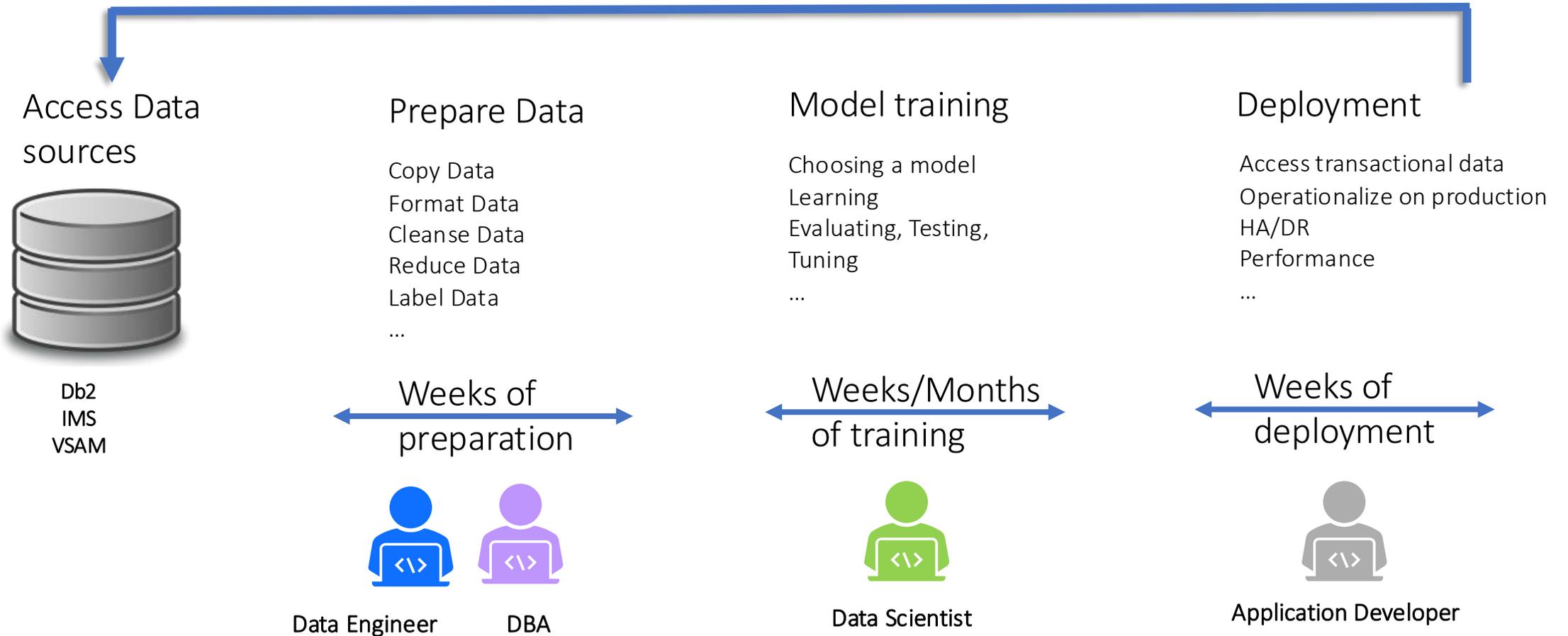
Database Embeddings

Generate embedding per unique values for each column and unique row

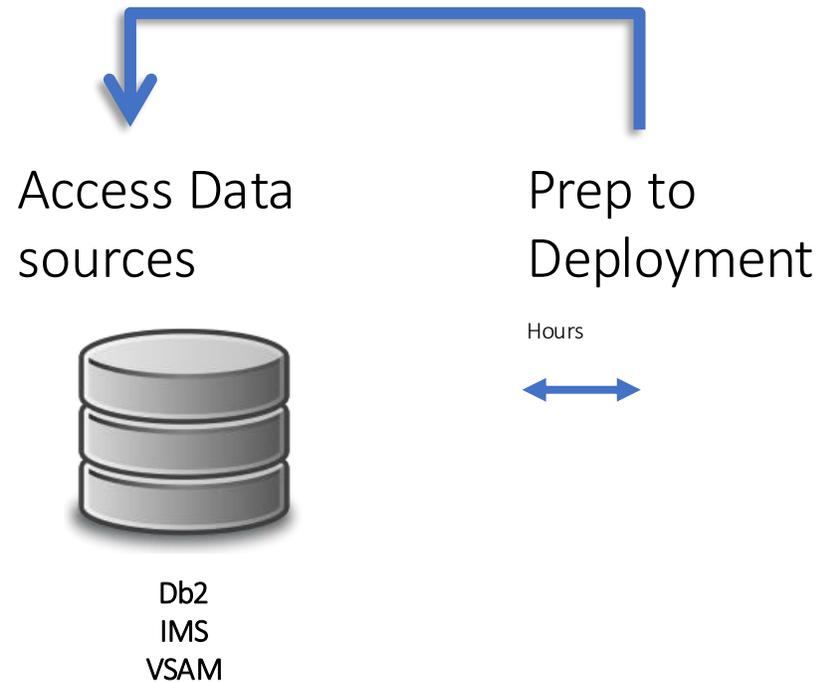


AI\_SIMILARITY('4400007492', CODE)

# Traditional Way to Train Data in Mainframe



## SQL DI Way



1. Choose table & relevant columns

2. Kickoff training

3. Run semantic queries on a model

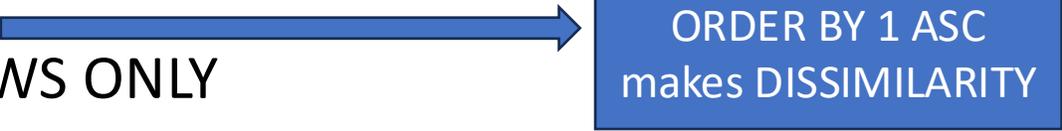
# 4 Ways to ask Db2

AI_SIMILARITY	<ul style="list-style-type: none"><li>Find <b>similar</b> entities</li></ul>	FL 500
AI_SEMANTIC_CLUSTER	<ul style="list-style-type: none"><li>Find entities that <b>belong to a group</b> of entities</li></ul>	FL 500
AI_ANALOGY	<ul style="list-style-type: none"><li>Analyze <b>relationship</b> between a pair of entities</li></ul>	FL 500
AI_COMMONALITY	<ul style="list-style-type: none"><li>Find the most <b>common</b> entities, or <b>outliers</b></li></ul>	FL 504

# AI Semantic Queries (1 | 2)

- AI\_SIMILARITY

```
SELECT AI_SIMILARITY(CUSTOMERID, '3668-QPYBK'), CHURN.*
FROM CHURN
ORDER BY 1 DESC
FETCH FIRST 5 ROWS ONLY
```



ORDER BY 1 ASC  
makes DISSIMILARITY

- AI\_SEMANTIC\_CLUSTER

```
SELECT AI_SEMANTIC_CLUSTER(CUSTOMERID,
                           '0280_XJGEX', '6467_CHFZW', '0093_XWZFY'), CHURN.*
FROM CHURN
ORDER BY 1 DESC
FETCH FIRST 5 ROWS ONLY
```

# AI Semantic Queries (2 | 2)

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- AI\_ANALOGY

```
SELECT AI_ANALOGY( 'Month-to-month' USING MODEL COLUMN CONTRACT,
                  'Electronic check' USING MODEL COLUMN PAYMENTMETHOD,
                  'One year',
                  PAYMENTMETHOD), I.*

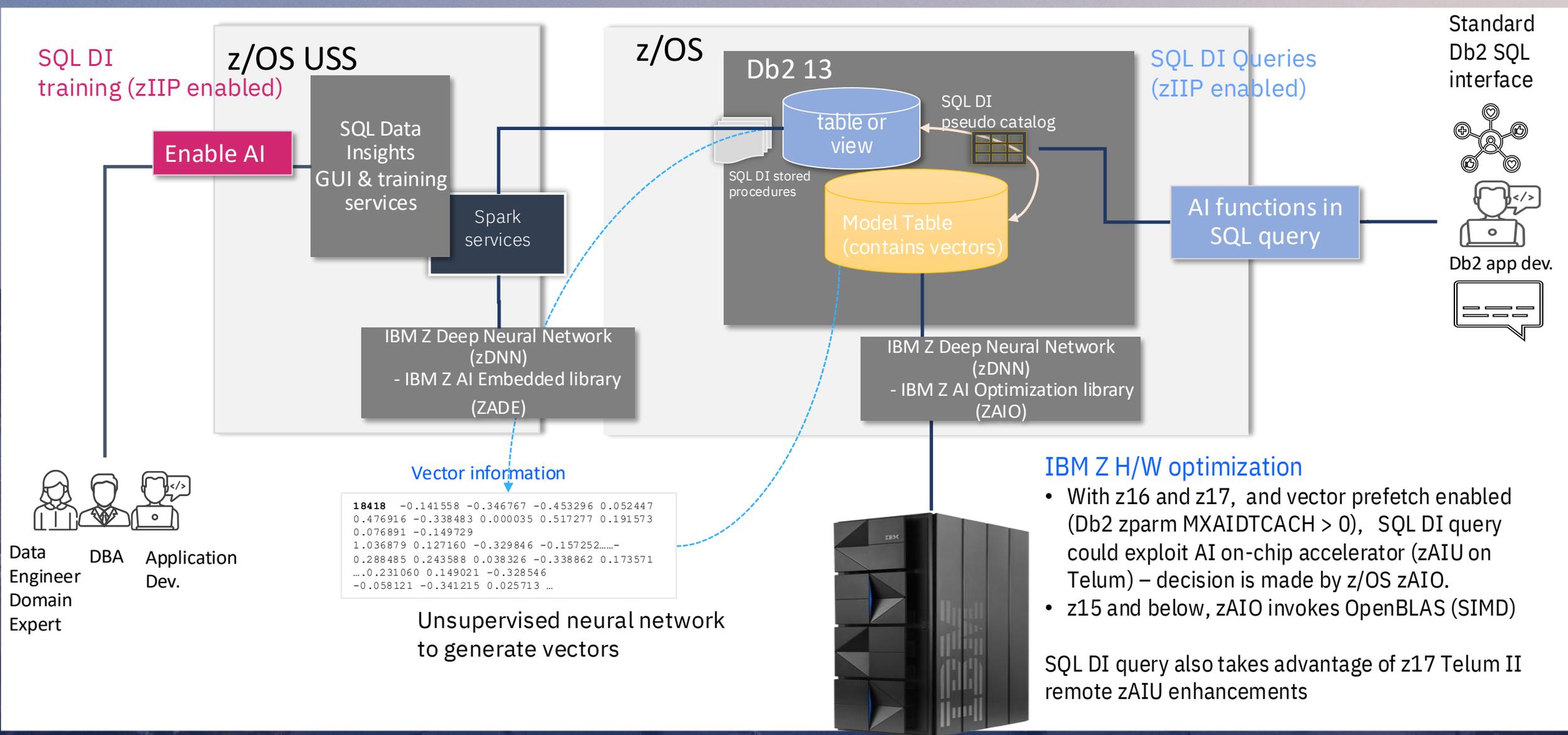
FROM CHURN
WHERE CONTRACT = 'One year'
ORDER BY 1 DESC
FETCH FIRST 5 ROWS ONLY
```

- AI\_COMMONALITY

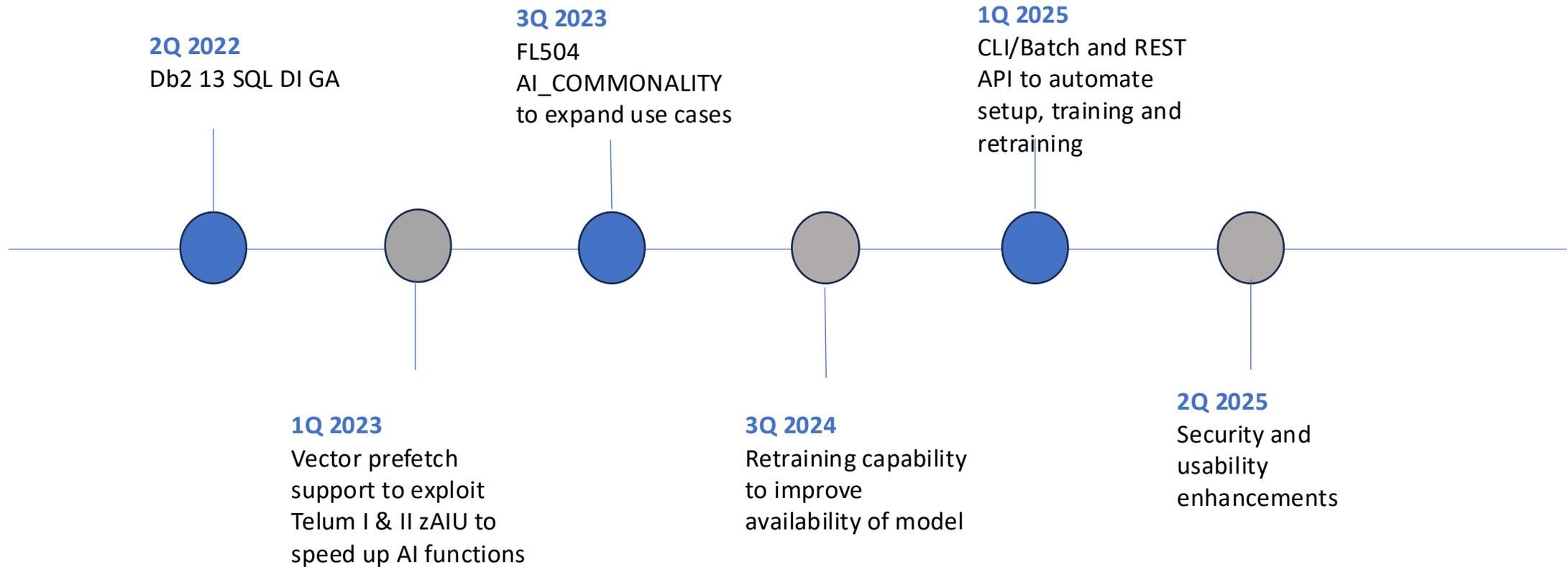
```
SELECT AI_COMMONALITY(CUSTOMERID), CHURN.*
FROM CHURN
ORDER BY 1 DESC
FETCH FIRST 5 ROWS ONLY
```



ORDER BY 1 ASC  
makes the least common - Outliers

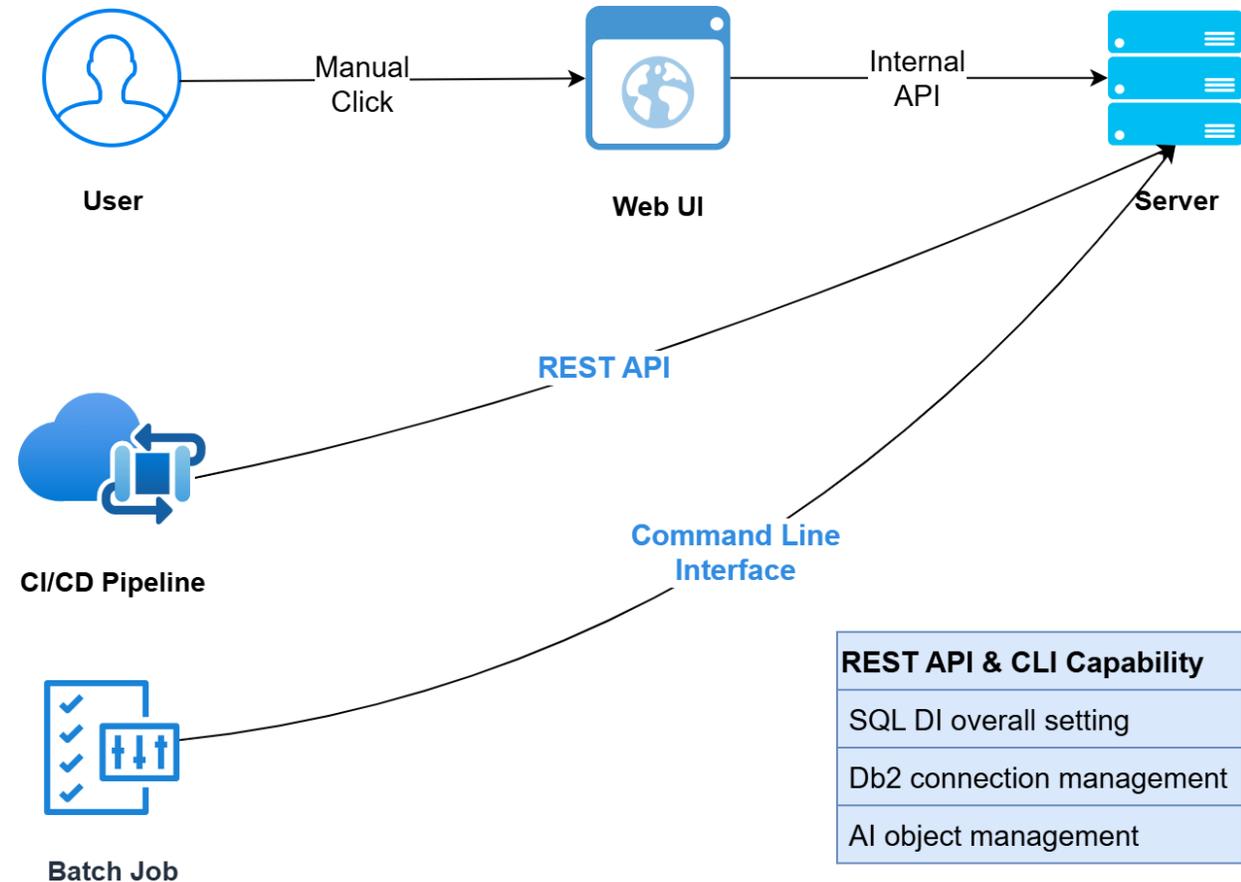


# Evolution of SQL DI



# Enhancements in 2025 (1 | 3)

- REST API and Command Line Interface (CLI)
  - REST API can be called by any applications and CI/CD pipelines, enable automation
  - CLI can be invoked from JCL, makes is able to schedule batch jobs for model training and retraining
  - Tighten security by using Auth Token & PASSTICKET to access SQL DI & Db2



# Enhancements in 2025 (2|3)

- Sample REST APIs and CLI commands

POST	/sqldi/v2/connections	Add a connection
PATCH	/sqldi/v2/connections/{connId}	Edit a connection
DELETE	/sqldi/v2/connections/{connId}	Remove a connection
GET	/sqldi/v2/connections/{connId}/objects	Get AI objects for a connection
POST	/sqldi/v2/connections/{connId}/objects	Create and enable an AI object for AI query
DELETE	/sqldi/v2/connections/{connId}/objects/{object}	Remove an AI object
GET	/sqldi/v2/connections/{connId}/objects/{object}/config	Get column configuration for an AI object
POST	/sqldi/v2/connections/{connId}/objects/{object}/retraining	Start model retraining
DELETE	/sqldi/v2/connections/{connId}/objects/{object}/retraining	Remove a retrained model
POST	/sqldi/v2/connections/{connId}/objects/{object}/retraining/deployment	Deploy a retrained model

- To create an AI object and enable it for AI query, issue the following command with the `-f` option:
 

```
./sqldi.sh create_object -f sqldi_object_model_input
```
- To view the enablement status and other details of an object, issue the following command with the `-f` option:
 

```
./sqldi.sh list_object -f sqldi_object_model_input -status_rc
```

`-status_rc` is optional. When specified, the response of the command includes the AI query enablement status of the object.
- To list all objects associated with a specific connection, issue the following command with the `-f` option:
 

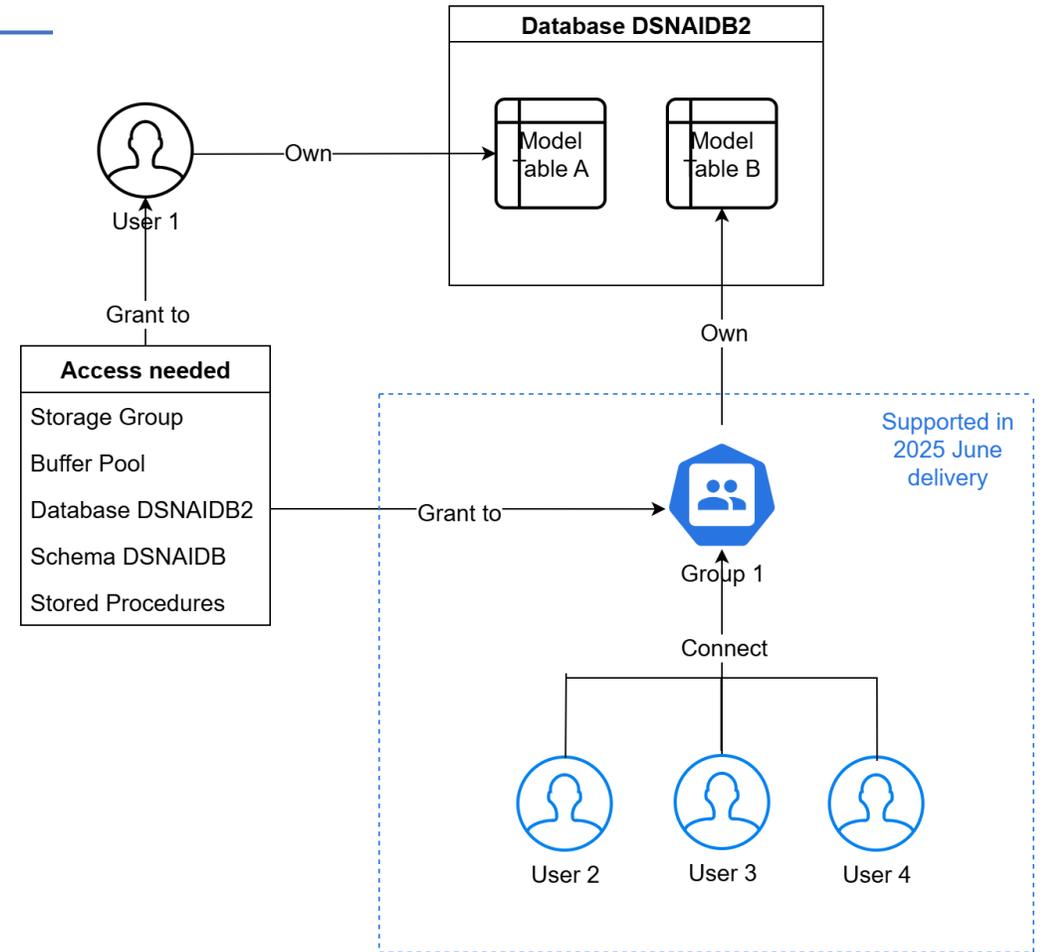
```
./sqldi.sh list_all_objects -f sqldi_object_model_input
```
- To remove an AI object, issue the following command with the `-f` option:
 

```
./sqldi.sh remove_object -f sqldi_object_model_input
```
- To view the column configuration of a specific object, issue the following command with the `-f` option:
 

```
./sqldi.sh list_column_config -f sqldi_object_model_input -o <column_config_file>
```

# Enhancements in 2025 (3 | 3)

- Support of Secondary Authorization ID
  - Manage user authorization using secondary authorization ID reduces security management effort



# SQL DI as of Today

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- Slow adoption... but catching up
  - Many clients have been consumed migrating to Db2 13
  - Not enough attention to the free feature
  - Not easy to find the use cases
  - Swiss Mobiliar have been a vocal advocate
  - FI shows their recent success on REST APIs and CLI feature
- Missing key features like
  - Support of unstructured data – 60% of clients have more than 1 TB of unstructured text in Db2 (logs, descriptions, comment, JSON, etc.)
  - Model retraining that takes less resources on production system

# SQL DI Vnext Overview

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Announcement: March 17  
GA: March 20th

- Major new features
  - Utilizes IBM Db2 Analytics Accelerator (IDAA) to provide AI capability perform AI model training using Integrated Facility for Linux (IFL) processors
  - Supports unstructured data – comments, descriptions, notes – stored in Db2 character columns
  - Supports incremental retraining – saves time and resources
- The evolution into an advanced priced zStack offering, designed to unlock far deeper intelligence from Db2 for z/OS and IBM Z Data.

# Packaging & Entitlement

- A standalone product
- Included Components
  - SQL DI (FMID HDBDD18)
  - IDAA 8.1 (FMIDs HAQTX10, JAQTX1D) - shopZ
  - IDAA SSC Installation image – FixCentral
  - License key
- Impact on Existing and New SQL DI and IDAA Customers

	Existing SQL DI Customer	New SQL DI Customer
Owns IDAA	<ul style="list-style-type: none"> <li>• Upgrade to SQL DI 1.1.4</li> <li>• Upgrade to IDAA 8.1.1</li> </ul>	<ul style="list-style-type: none"> <li>• Install SQL DI 1.1.4</li> <li>• Upgrade to IDAA 8.1.1</li> </ul>
Do not own IDAA	<ul style="list-style-type: none"> <li>• Upgrade to SQL DI 1.1.4</li> <li>• Install IDAA 8.1.1 (limited to SQL DI entitlement)</li> </ul>	<ul style="list-style-type: none"> <li>• New Installation of SQL DI 1.1.4</li> <li>• Install IDAA 8.1.1 (limited to SQL DI entitlement)</li> </ul>

# Support Unstructured Data

Db2 for z/OS

Claim ID	Customer ID	Address	Coverage Class	Premium Amount	Cause of Claim	Total Claimed	...	CLAIM_NARRATIVE
1001	123	5 Pine Rd...	HO-4	2000	Flood	25000		Your claim form is confused. Have someone call me...
1002	456	70 First St..	HO-1	1500	Fire	10000		Please handle this soon. This is urgent. Fire started...
1003	789	15 Oak St..	HO-2	3000	Wind	5000		We just had some high winds. I need to file a claim....

VARCHAR (128)

Structured data (Key, Categorical, Numeric)

Unstructured data (Text)



Any SQL Application  
Batch, CICS,  
JDBC/ODBC,  
3<sup>rd</sup> party application

Semantic Queries  
using AI functions



zOS

SQL DI

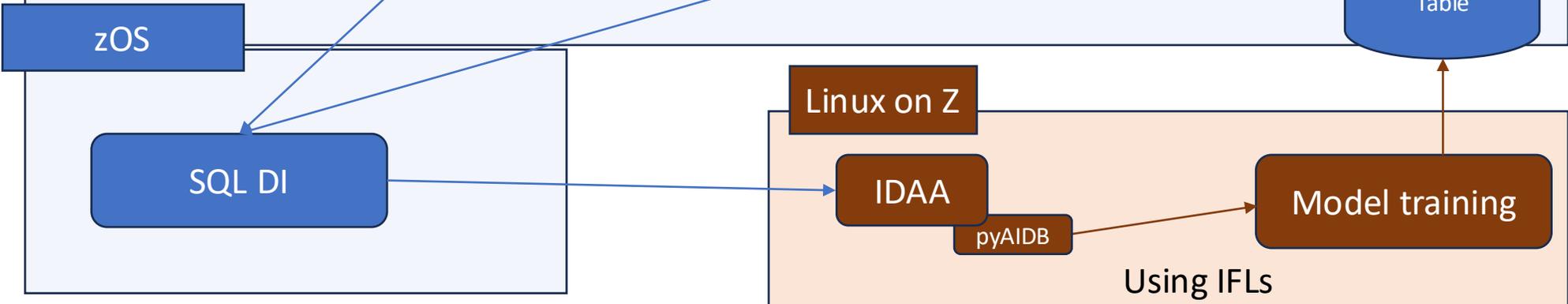
Linux on Z

IDAA

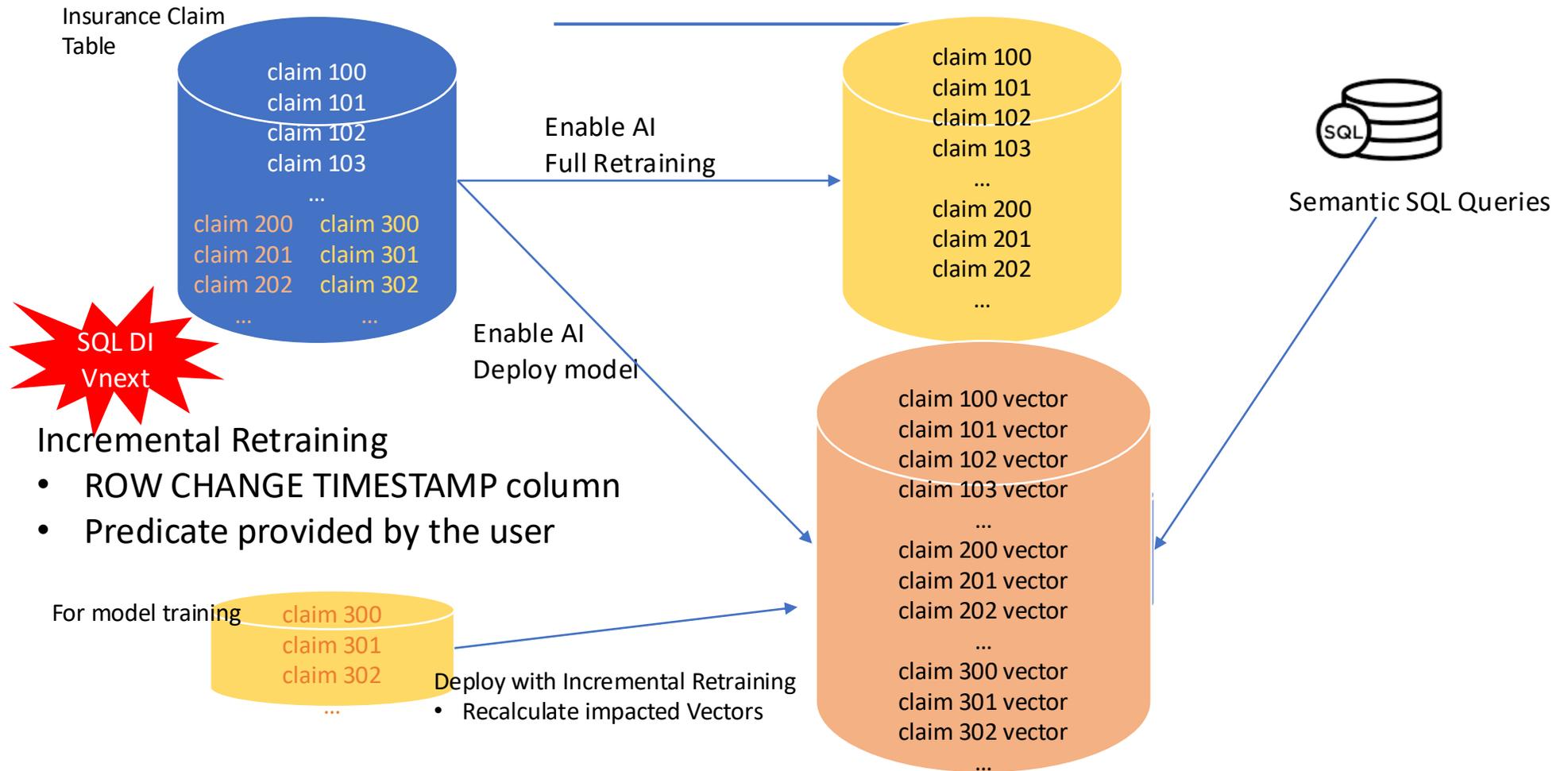
pyAIDB

Model training

Using IFLs



# Incremental Retraining



# Retraining Guidelines: Full vs. Incremental

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Scenario	Recommended Action
New rows Inserted only	Incremental retraining
Majority of data updated	Full retraining
Majority of data deleted	Full retraining
Incremental data > 75 % original	Full retraining
Hard to identify changed data	Full retraining
AI queries mainly use AI Key columns	Incremental retraining
AI queries mainly use non-AI Key columns (numeric or Categorical)	Full retraining

# Insurance Use Case Overview

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- 3 Insurance related tables
  - Insurance\_Policy – 191 columns with policy coverage details
  - Insurance\_Applicants – 149 columns with customer profile information
  - Insurance\_Claims – 541 columns with narrative on claim used as Text
- Goal is to
  - Gain deeper insight into insurance claims
  - Identify policies that may be underpriced or undercharged
  - Identify policies and customers suitable for upselling additional coverage
- Objects used for training
  - Train three models based on individual tables
  - Create a view that INNER JOIN Policy and Applicants table and LEFT JOIN with Claims table (on policy\_id column)

# Connections

IBM SQL Data Insights

## Connections

Find connection Add connection +

Name	Host/Location	Type	Updated on	
▼ dtec433	stlab0c.svl.ibm.com/DSNDB3B	Db2 v13	Nov 20, 2025 11:21 AM	⋮
▼ dtec736	dtec736.vmec.svl.ibm.com/STLEC1	Db2 v13	Feb 3, 2026 9:41 PM	⋮
▼ fyrec41d	fyrec41d.vmec.svl.ibm.com/STLEC1	Db2 v13	Nov 22, 2025 9:19 AM	⋮
▼ DB3B_DEMO	STLAB0C.SVL.IBM.COM/DSNDB3B	Db2 v13	Feb 11, 2026 5:01 PM	⋮
▼ d622	dtec622.vmec.svl.ibm.com/STLEC2	Db2 v13	Nov 26, 2025 4:45 AM	⋮
▼ d100	dtec100.vmec.svl.ibm.com/STLEC1	Db2 v13	Nov 26, 2025 4:46 AM	⋮
▼ csrec638	csrec638.vmec.svl.ibm.com/STLEC2B	Db2 v13	Feb 11, 2026 7:27 PM	⋮
▼ db3b_ssl	stlab0c.svl.ibm.com/DSNDB3B	Db2 v13	Feb 11, 2026 4:43 PM	⋮
▼ d735	dtec735.vmec.svl.ibm.com/STLEC1	Db2 v13	Feb 9, 2026 5:04 PM	⋮
▼ f754	fvtec754.vmec.svl.ibm.com/STLEC2	Db2 v13	Feb 2, 2026 8:10 PM	⋮
▼ f218	fvtec218.vmec.svl.ibm.com/STLEC3	Db2 v13	Feb 9, 2026 5:01 PM	⋮
▼ DB3F	STLAB0D.SVL.IBM.COM/DSNDB3F	Db2 v13	Feb 3, 2026 9:03 PM	⋮
▼ fyrec41p_ssl	fyrec41p.vmec.svl.ibm.com/STLEC1	Db2 v13	Feb 10, 2026 11:47 AM	⋮
▼ DB3F_SSL	STLAB0D.SVL.IBM.COM/DSNDB3F	Db2 v13	Feb 3, 2026 9:09 PM	⋮

Connect

Edit

List AI objects

Delete

# Enable AI (1 | 9)

The screenshot shows the 'Edit db3b\_ssl' configuration page in IBM SQL Data Insights. The page is divided into several sections:

- Connection overview:** Name: db3b\_ssl; Description (optional): Enter description.
- Connection details:** Host name or IP address: stlab0c.svl.ibm.com; Port: 19702; Location: DSNDB3B; JDBC properties (optional): clientappiCompat=v12R1M503; Db2 special registers (optional): CURRENT CLIENT\_USERID=test.
- IDAA Details:** Accelerator name: SDISSC16.
- Certificates:** SSL Certificate (optional): A text area containing a certificate key block starting with '-----BEGIN CERTIFICATE-----'. Below it, 'Port enabled for SSL connections' is checked.
- Credentials:** Username: jalee; Password: masked with dots.

A red box highlights the 'IDAA Details' and 'Certificates' sections. A red text label 'Required fields for SQL DI vNext' points to this highlighted area. At the bottom right, there are 'Cancel' and 'Save' buttons.

# Enable AI (2 | 9)

IBM SQL Data Insights

Connections / AI objects

Enabling an object for AI query trains a machine learning model. You can retrain the model, if eligible, with the existing column configuration. Expand the row for the object to access model retraining actions.

db3b\_ssl

Find object Add object + Run query

Name	Schema	Type	Status	Last updated
CHURN	ADMF001	Table	Enabled <span>Retrained</span> <span>Table loaded</span>	Feb 12, 2026 5:50 AM
CHURN_VIEW	ADMF001	View	Enabled <span>Table operational</span>	Feb 12, 2026 5:27 AM
MUTUALFUND	FVT	Table	Enabled <span>Table loaded</span>	Feb 12, 2026 3:22 AM
CHURN_PRIMARY_KEY	ADMF001	Table	Enabled <span>Table loaded</span>	Feb 11, 2026 2:57 PM
CHURN_SWAGGER	ADMF001	Table	Enabled	Feb 11, 2026 2:55 PM
CHURN_TEMP_TABLE	ADMF001	Table	Enabled <span>Retrained</span>	Feb 11, 2026 2:32 PM
CHURN_REG	ADMF001	Table	Enabled <span>Retraining failed</span>	Feb 11, 2026 2:01 PM
TEST_DECFLOAT	JASONCU	Table	Failed <span>Table loaded</span>	Feb 11, 2026 12:06 PM
RUNTIMES_ENV	ADMF001	Table	Enabled	Feb 11, 2026 11:56 AM
BLANK TEST	ADMF001	Table	Enabled	Feb 11, 2026 11:52 AM

Resources per page: 10 1--10 of 25 items 1 of 3 pages

# Enable AI (3 | 9)

IBM SQL Data Insights

Connections /

## Add object

db3b\_ssl  
Choose one or more schemas to filter and list matching Db2 objects. Then, select the Db2 objects to add as new AI objects or enable objects for AI query.

Schema: Select schema ^

Schema	Last activity
<input type="checkbox"/> ADME001	
<input type="checkbox"/> DEMO	
<input type="checkbox"/> DSNBBQRY	
<input type="checkbox"/> DSNAIADB	
<input type="checkbox"/> DSNAAQT	
<input type="checkbox"/> DSNBSCQ	

No object available. Select one or more schemas to list available objects.

Items per page: 10 | 0-0 of 0 items | 1 of 1 page

# Enable AI (4 | 9)

IBM SQL Data Insights

Connections /

### Add object

db3b\_ssl

Choose one or more schemas to filter and list matching Db2 objects. Then, select the Db2 objects to add as new AI objects or enable objects for AI query.

Schema: 1 x Select schema

Find table/view

Name	Schema	Last activity
<input type="checkbox"/> MUTUALFUND	DEMO	Feb 6, 2026 7:22 AM
<input type="checkbox"/> CREDIT_CARD_TRANSACTION_2	DEMO	Jan 22, 2026 5:20 AM
<input type="checkbox"/> CREDIT_CARD_TRANSACTION	DEMO	Jan 21, 2026 6:13 AM
<input type="checkbox"/> INSURANCE_CLAIMS	DEMO	Jan 12, 2026 2:25 AM
<input type="checkbox"/> AML_TRANSACTION	DEMO	Jan 9, 2026 7:15 AM
<input type="checkbox"/> INSURANCE_UNDERWRITING	DEMO	Dec 15, 2025 7:07 AM
<input type="checkbox"/> INSURANCE_APPLICANTS	DEMO	
<input type="checkbox"/> INSURANCE_CLAIMS_2	DEMO	
<input type="checkbox"/> INSURANCE_CLAIM_2	DEMO	
<input type="checkbox"/> INSURANCE_POLICY	DEMO	
<input checked="" type="checkbox"/> V_INSURANCE_POLICY_CLAIM_GENERAL	DEMO	

Items per page: 20 | 1-11 of 11 items

1 of 1 page

Cancel Add object Enable AI query

# Enable AI (5 | 9)

The screenshot shows the IBM SQL Data Insights interface. At the top, a green notification bar states "AI objects are added successfully." Below this, the "AI objects" section provides instructions on enabling objects for AI queries. A table lists objects in the "db3b\_ssl" database. The first row, "V\_INSURANCE\_POLICY\_CLAIM\_GENERAL", has a status of "Created" and a context menu open with "Enable AI query" selected. The second row, "CHURN", has a status of "Enabled" with "Retrained" and "Table loaded" sub-statuses.

IBM SQL Data Insights

AI objects are added successfully.

### AI objects

Enabling an object for AI query trains a machine learning model. You can retrain the model, if eligible, with the existing column configuration. Expand the row for the object to access model retraining actions.

db3b\_ssl

Find object

Add object + Run query

Name	Schema	Type	Status	Last updated
V_INSURANCE_POLICY_CLAIM_GENERAL	DEMO	View	Created	Feb 12, 2026 5:53 AM
CHURN	ADMF001	Table	Enabled Retrained Table loaded	Feb 12, 2026 5:50 AM

- Enable AI query
- Analyze data
- View model
- Remove object
- Export column co...

# Enable AI (6 | 9)

The screenshot shows the 'Enable AI query' configuration interface in IBM SQL Data Insights. The breadcrumb trail is 'Connections / AI objects / DEMO.V\_INSURANCE\_POLICY\_CLAIM\_GENERAL'. The main heading is 'Enable AI query' with the object name 'DEMO.V\_INSURANCE\_POLICY\_CLAIM\_GENERAL' below it. A descriptive paragraph explains that enabling AI query trains a model based on column configuration, including selecting columns, assigning SQL DI data types, designating NULL values, and specifying authorization. On the left, three radio buttons are present: 'Select columns and assign SQL DI data types' (selected), 'Specify column values as NULL for model training', and 'Specify additional authorization'. The main area contains instructions to 'Select one or more columns and assign each column a SQL DI data type'. Below this is a 'Select training engine' dropdown menu with 'Db2 Analytics Accelerator' selected and highlighted by a red box. Below the dropdown is a table with 88 items selected, showing a list of columns and their assigned SQL DI data types. At the bottom right, there are 'Cancel' and 'Next' buttons.

IBM SQL Data Insights

Connections / AI objects /

### Enable AI query

DEMO.V\_INSURANCE\_POLICY\_CLAIM\_GENERAL

Enabling AI query trains a model based on the column configuration of an object. To enable DEMO.V\_INSURANCE\_POLICY\_CLAIM\_GENERAL for AI query, create a column configuration by selecting columns, assigning SQL DI data types, designating column values as NULL for model training, and specifying additional authorization for model management. Optionally, [import](#) a column configuration from a valid JSON file. ⓘ

- Select columns and assign SQL DI data types
- Specify column values as NULL for model training
- Specify additional authorization

Select one or more columns and assign each column a SQL DI data type. Set the numeric or categorical type to as many columns as you want, but the key type to only one column. A column configuration with a key column must also include at least one numeric or categorical column.

Select training engine

Db2 Analytics Accelerator ^

z/OS Spark

Db2 Analytics Accelerator v

88 Items selected | Cancel

<input checked="" type="checkbox"/> Column name	SQL DI data type ⓘ
<input checked="" type="checkbox"/> COVERAGE_CLASS	Categorical v
<input checked="" type="checkbox"/> PREMIUM_AMOUNT	Numeric v
<input checked="" type="checkbox"/> INSURANCE_POLICY_ID	Categorical v
<input checked="" type="checkbox"/> INSURANCE_AGENCY_ID	Categorical v
<input checked="" type="checkbox"/> INDEX_TO_INSURANCE_APPLIC_CSV	Numeric v

Cancel Next

# Enable AI (7|9)

IBM SQL Data Insights

Connections / AI objects / Enable AI query

DEMO.V\_INSURANCE\_POLICY\_CLAIM\_GENERAL

Enabling AI query trains a model based on the column configuration of an object. To enable DEMO.V\_INSURANCE\_POLICY\_CLAIM\_GENERAL for AI query, create a column configuration by selecting columns, assigning SQL DI data types, designating column values as NULL for model training, and specifying additional authorization for model management. Optionally, [import](#) a column configuration from a valid JSON file.

- Select columns and assign SQL DI data types
- Specify column values as NULL for model training**
- Specify additional authorization

You can specify column values of your choice, such as N/A, n/a, na, NR, invalid, and empty, as NULL values. SQL DI ignores user-specified NULL values during model training.

**Specify NULL values that apply to all columns**

Use a semicolon to separate multiple values. Example: N/A;n/a;na;NR;invalid;empty

Column name	Specify NULL values that apply to a specific column
COVERAGE_CLASS	Use a semicolon to separate multiple values. Example: N
INSURANCE_POLICY_ID	Use a semicolon to separate multiple values. Example: N
INSURANCE_AGENCY_ID	Use a semicolon to separate multiple values. Example: N
INSURANCE_COMPANY_ID	Use a semicolon to separate multiple values. Example: N
MONETARY_CURRENCY	Use a semicolon to separate multiple values. Example: N

Back Next

IBM SQL Data Insights

Connections / AI objects / Enable AI query

DEMO.V\_INSURANCE\_POLICY\_CLAIM\_GENERAL

Enabling AI query trains a model based on the column configuration of an object. To enable DEMO.V\_INSURANCE\_POLICY\_CLAIM\_GENERAL for AI query, create a column configuration by selecting columns, assigning SQL DI data types, designating column values as NULL for model training, and specifying additional authorization for model management. Optionally, [import](#) a column configuration from a valid JSON file.

- Select columns and assign SQL DI data types
- Specify column values as NULL for model training
- Specify additional authorization**

Optionally, specify a Db2 secondary authorization ID to authorize all associated users to manage the AI object and model. Make sure that the ID has sufficient permissions.

SOLDIGRP

Back Enable

# Enable AI (8|9)

Training DEMO.V\_INSURANCE\_POLICY\_CLAIM\_GENERAL

Object DEMO.V\_INSURANCE\_POLICY\_CLAIM\_GENERAL is ready for AI query enablement that trains a machine learning model. You cannot change the column configuration after model training starts. Click "Cancel" to make changes or "Enable" to proceed. For model training on Linux on Z, SQL DI Pro uses IDAA to create shadow tables as data input.

Cancel Enable

IBM SQL Data Insights

Enabling AI query. AI query enablement for DEMO.V\_INSURANCE\_POLICY\_CLAIM\_GENERAL is in progress. Refresh this page for status updates.

### AI objects

Enabling an object for AI query trains a machine learning model. You can retrain the model, if eligible, with the existing column configuration. Expand the row for the object to access model retraining actions.

db3b\_ssl

Find object

Add object + Run query

Name	Schema	Type	Status	Last updated
V_INSURANCE_POLICY_CLAIM_GENERAL	DEMO	View	Enabling Table operational	Feb 12, 2026 5:54 AM

# Enable AI (9|9)

IBM SQL Data Insights

Connections / AI objects

Enabling an object for AI query trains a machine learning model. You can retrain the model, if eligible, with the existing column configuration. Expand the row for the object to access model retraining actions.

db3b\_ssl

Find object

Add object + Run query

Name	Schema	Type	Status	Last updated
▼ V_INSURANCE_POLICY_CLAIM_GENERAL	DEMO	View	Enabled Table operational	Feb 12, 2026 6:10 AM

# Incremental Retraining (1 | 3)

IBM SQL Data Insights

Connections / AI objects

Enabling an object for AI query trains a machine learning model. You can retrain the model, if eligible, with the existing column configuration. Expand the row for the object to access model retraining actions.

db3b\_ssl

Find object

Add object + Run query

Name	Schema	Type	Status	Last updated
CHURN_VIEW	ADMF001	View	Enabled <span>Table operational</span>	Feb 12, 2026 11:21 AM
CHURN	ADMF001	Table	Enabled <span>Deployed</span> <span>Table loaded</span>	Feb 12, 2026 11:18 AM
MUTUALFUND	FVT	Table	Enabled <span>Table loaded</span>	Feb 12, 2026 11:16 AM
V_APPLICANT_PROPERTY_VALUE	DEMO	View	Enabled <span>Table operational</span>	Feb 12, 2026 7:28 AM
V_INSURANCE_POLICY_CLAIM_WATERDAMAGE	DEMO	View	Enabled <span>Table operational</span>	Feb 12, 2026 7:07 AM
V_INSURANCE_POLICY_CLAIM_GENERAL	DEMO	View	Enabled <span>Table operational</span>	Feb 12, 2026 6:10 AM
CHURN_PRIMARY_KEY	ADMF001	Table	Enabled <span>Table loaded</span>	Feb 11, 2026 2:57 PM
CHURN_SWAGGER	ADMF001	Table	Enabled	Feb 11, 2026 2:55 PM
CHURN_TEMP_TABLE	ADMF001	Table	Enabled <span>Retrained</span>	Feb 11, 2026 2:32 PM

**Model retraining for V\_INSURANCE...**

Eligible:

Status: Not retrainable

Start retraining

Deploy model

Remove model

View column conf...

# Incremental Retraining (2 | 3)

IBM SQL Data Insights

[Connections](#) / [AI objects](#) /

Retrain model

DEMO.V\_INSURANCE\_POLICY\_CLAIM\_GENERAL

Preview of data filtered by the specified predicate

DEMO.V\_INSURANCE\_POLICY\_CLAIM\_GENERAL

Total rows: 1701 (with 100 rows displayed)

INCY_ID	INSURANCE_COMPANY_ID	HEATING_TYPE_OF_UPDATE	HAIL_DAMAGE_COVERAGE_LIM	START_DATE	YEAR_BUILT	FIRE_DAMAGE
	1412378E0	No Updates	44000	2025-09-03	2024	2000
	141237400	No Updates	144000	2025-09-23	2015	5000
	141237400	No Updates	144000	2025-09-23	2015	5000
	141239140	No Updates	1024000	2025-09-30	2017	5000
	141239FE0	No Updates	98000	2025-09-04	2002	2000
	1412378E0	No Updates	34000	2025-09-22	1996	5000
	141237400	Full	41000	2025-09-03	1965	5000
	141239140	No Updates	30000	2025-09-12	2021	250
	141239140	Full	96000	2025-09-02	1963	5000
	141237400	No Updates	153000	2025-09-04	2024	250
	141239B00	No Updates	116000	2025-09-23	2016	250

# Incremental Retraining (3 | 3)

IBM SQL Data Insights

Retraining. Model retraining for object DEMO.V\_INSURANCE\_POLICY\_CLAIM\_GENERAL is in progress. Refresh this page for status updates.

### AI objects

Enabling an object for AI query trains a machine learning model. You can retrain the model, if eligible, with the existing column configuration. Expand the row for the object to access model retraining actions.

db3b\_ssl

Find object Add object + Run query

Name	Schema	Type	Status	Last updated
CHURN_VIEW	ADMF001	View	Enabled <span>Table operational</span>	Feb 12, 2026 11:21 AM
CHURN	ADMF001	Table	Enabled <span>Deployed</span> <span>Table loaded</span>	Feb 12, 2026 11:18 AM
MUTUALFUND	FVT	Table	Enabled <span>Table loaded</span>	Feb 12, 2026 11:16 AM
V_APPLICANT_PROPERTY_VALUE	DEMO	View	Enabled <span>Table operational</span>	Feb 12, 2026 7:28 AM
V_INSURANCE_POLICY_CLAIM_WATERDAMAGE	DEMO	View	Enabled <span>Table operational</span>	Feb 12, 2026 7:07 AM
V_INSURANCE_POLICY_CLAIM_GENERAL	DEMO	View	Enabled <span>Retraining in progress</span> <span>Table operational</span>	Feb 12, 2026 6:10 AM
CHURN_PRIMARY_KEY	ADMF001	Table	Enabled <span>Table loaded</span>	Feb 11, 2026 2:57 PM

# AI Query for Insurance Use Cases (1 | 2)

---

- Find claims SIMILAR to a suspicious claim  

```
SELECT AI_SIMILARITY (I.CLAIM_ID, 207550) AS SCORE, I.*  
FROM INSURANCE_CLAIMS I  
ORDER BY SCORE ASC  
FETCH FIRST 10 ROWS ONLY;
```
- Identify the LEAST COMMON claims - outliers  

```
SELECT AI_COMMONALITY(I.CLAIM_ID) AS SCORE, I.*  
FROM INSURANCE_CLAIMS I  
ORDER BY SCORE DESC;
```

## AI Query for Insurance Use Cases (2|3)

- Find policies belong to a group of policies known underwriting pattern of concern.

```
SELECT AI_SEMANTIC_CLUSTER (POLICY_ID,
                             'A08670943', 'T43877806', 'C30381936') AS SCORE
FROM INSURANCE_POLICY P
WHERE POLICY_ID NOT IN ('A08670943', 'T43877806', 'C30381936')
ORDER BY SCORE DESC;
```
- Identify policies in state of California whose underwriting risk profile is analogous to a known risky customer in New York.

```
SELECT AI_ANALOGY('NEW YORK' USING MODEL COLUMN POLICY_STATE,
                  'Q06-42-2341' USING MODEL COLUMN POLICY_ID,
                  'CALIFORNIA',
                  POLICY_ID) AS SCORE, P.*
FROM INSURANCE_POLICY P
WHERE DRIVER_STATE = 'CALIFORNIA'
ORDER BY SCORE DESC;
```

# AI Query for Insurance Use Cases (3 | 3)

---

- Looking for a coverage gap
  - Identify claims on water damage that do not have coverage on flood
  - Run either AI\_SIMILARITY or AI\_SEMANTIC\_CLUSTER to find the similar claims

```
SELECT AI_SEMANTIC_CLUSTER (CLAIM_ID,  
                             '207550', '509853', '717312') AS SCORE  
FROM V_INSURANCE_POLICY_APPLICANT_CLAIM  
WHERE POLICY_ID NOT IN ('A08670943', 'T43877806', 'C30381936')  
ORDER BY SCORE DESC;
```

# Potential Use Cases (1 | 2)

---

- Finance (Consumer Banking, Investment Advisors)
  - Find customer with similar transactions
  - Wealth Management
  - Identify stocks with similar behavior as determined by their numerical attributes (structured data)
  - Mutual Fund analysis incorporated with strategy description, manager's commentary that suites your goal (unstructured data)
- Fraud Detection
  - Anti money laundering
  - Credit card fraud detection

# Potential Use Cases (2 | 2)

---

- Insurance
  - Claim analysis – Identify similar/dissimilar claims
  - Underwriting – Risk assessment for the new policy
  - Upselling – Identify opportunities for revenue generation
- IT Analytics
  - Identify tickets with similar behavior/patterns
  - Identify customers with similar ticket patterns
- Customer Analytics
  - Find similar customers based on buying patterns
  - Customer Churn Analytics

# Industry Packs

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- Demonstrate how structured and unstructured data can be unified under Db2 with AI-drive insights.
- Each Industry Pack will include:
  - Sample table DDL with data
  - Prebuilt model
  - Ready-to-run Jupyter notebooks
  - Semantic SQL examples using AI functions
- Industries from
  - Finance (Credit Card Transactions, Bank Transactions)
  - Insurance (Claims, Underwriting, Up-Selling)
  - Cross-Industry (Churn Prediction, Entity Resolution)
  - And more are planned to be included

# Industry Pack

The screenshot displays a GitHub repository named 'Industry-Packs' under the user 'db2z-project-orion'. The repository is private and contains several folders: 'aml\_transaction', 'credit\_card\_transaction', 'insurance\_claims', 'insurance\_underwriting', and 'mutual\_fund'. A file browser on the right shows the contents of the 'insurance\_claims' folder, including 'insurance\_claims.ipynb', 'readme.md', 'readme\_db2.md', 'readme\_notebook.md', 'requirements.txt', and 'setup.py'. The 'insurance\_claims.ipynb' file is selected, and its preview is shown on the right. The notebook title is 'aml and insurance claim enhancements' by user 'bli'. The preview shows the title 'Insurance Claims Industry Pack', version '2/05/2026', and an introduction section. The introduction states that the notebook explores the insurance underwriting dataset using SQL Data Insights Pro, which analyzes both structured and unstructured content. It notes that insurance providers process large volumes of claims, making it challenging for analysts to quickly identify fraudulent, anomalous, or high-risk claims. SQL DI Pro helps claims analysts by:

- Identify claims similar to known fraudulent or high-risk cases
- Detect anomalous claims or claimants that deviate from normal behavior
- Transfer known fraud or risk patterns across regions, claim types, or policyholders
- Group related claims into behavioral clusters that may indicate coordinated or repeated fraud

The background section is also visible at the bottom of the preview.

# Summary: SQL DI in One-Pager

## The problem

Teams have valuable structured and unstructured business data in their Db2 for z/OS tables. To get deeper insight, they often copy data to other systems or do manual analysis. That adds time, cost, and compliance risk.

## Main Features

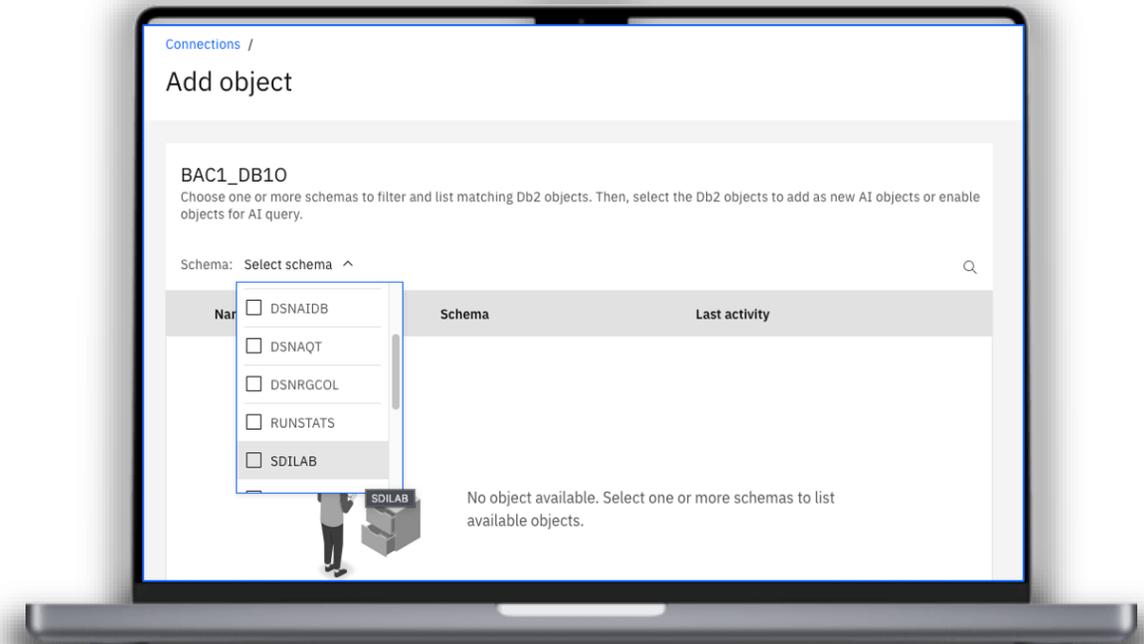
- ✓ Search by meaning, not just exact matches
- ✓ Find records similar to a case, claim, transaction, or customer profile
- ✓ Detect outliers and unusual behavior earlier in the data lifecycle
- ✓ Analyze structured data together with text, including notes, descriptions, and logs
- ✓ Incremental Retraining to include new data while saving resources

## The solution

Instantly uncover patterns across your Db2 for z/OS data with advanced AI that is optimized and easy to use. SQL Data Insights discovers relationships and similarities that traditional means can't – so that teams can quickly find “cases like this”, spot unusual behavior early, and make faster decisions without moving data off platform.

## Persona

- ✓ Business analysts
- ✓ Application Developer
- ✓ Db2 architects / DBAs
- ✓ IT leaders



# Hands-on Lab on SQL DI

## **C14A & C14B**

Hands-on Lab: Performing AI queries with Db2 for z/OS using SQL Data Insight

Time: Wednesday, March 18 2pm – 5:30pm

Location: Cross Platform/App Dev Room

Please bring you own laptop.

IDUG

2026

Sydney | March 16 - 18

# AU Db2 TECH CONFERENCE

## Session Title

Jae Lee, *IBM*

Contact: [jalee@us.ibm.com](mailto:jalee@us.ibm.com)

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Session Code: A05



Platform:

Db2 for zOS

An aerial view of the Sydney Harbour Bridge and the city skyline at dusk. The bridge is illuminated, and the city lights are visible in the background. The water is dark, and many boats are visible in the harbour. The sky is a mix of blue and orange, indicating sunset or sunrise.

# IDUG

2026 Australia **Db2** Tech Conference