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Experience AI queries through SQL Data Insights Hands-on Lab

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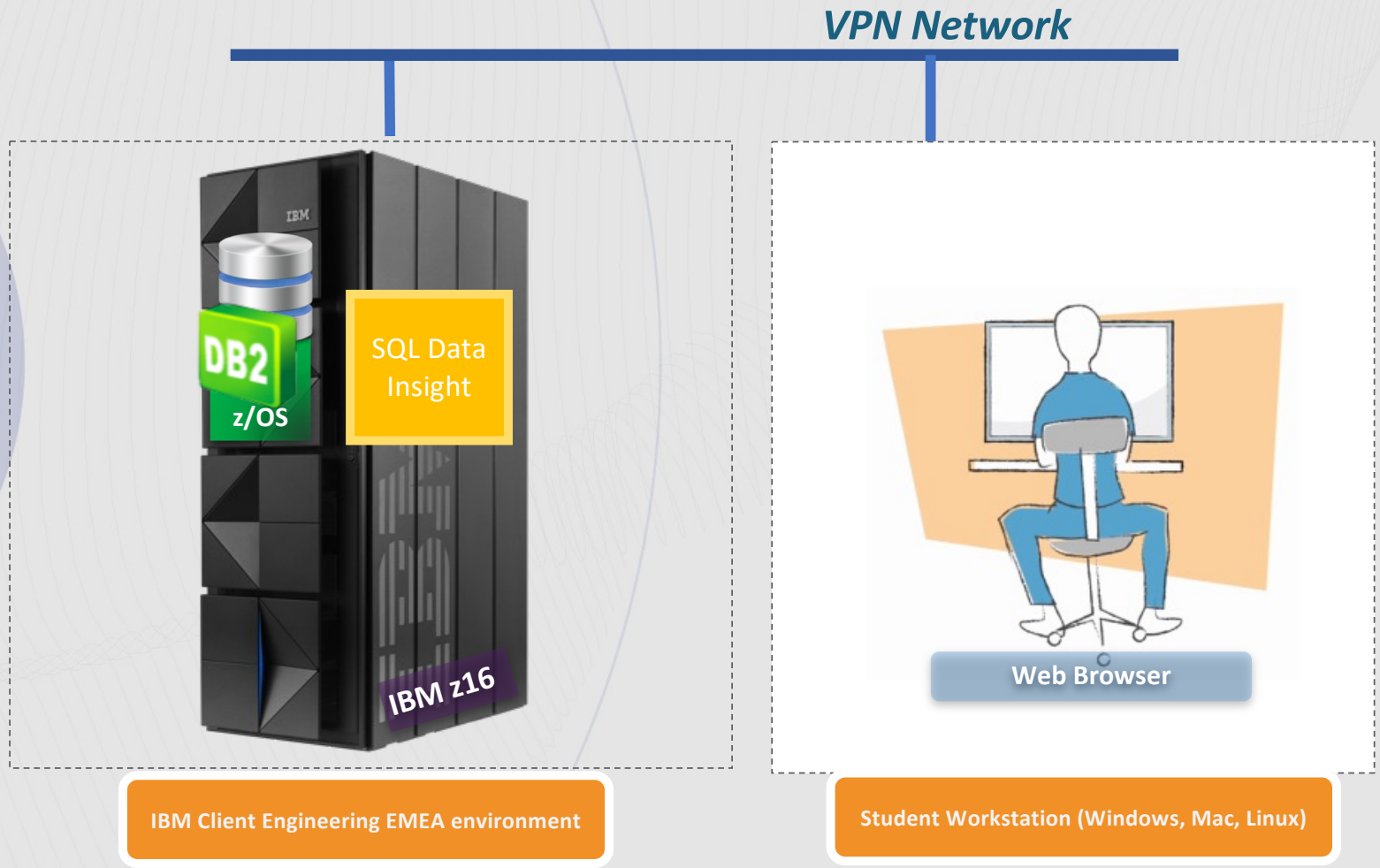
Agenda

- Opening
- SQL DI HOL - Introduction
  (15 minutes)
- SQL DI HOL - Data preparation, Semantic queries on Db2 v13
  (45 minutes)

Hands-On-Lab Architecture



Hands-on Lab1 materials

- Please download the hands-on lab scripts from this github repository.

  https://github.com/PasamonteG/SQLDI_Install/tree/main/SQLAdriaLab or

- Please find the zVA Jumpbox VMs and credential for the hands-on lab 1 in the table bel

Student	zVA Web Access Point	zVA User for Web Access Point	zVA Password
Student1	https://T-6554-159-8-176-78.ibmztrialmachines.com/	Administrator	TwyjK9N6BT2vyC0eJAtz
Student2	https://T-6555-159-8-134-214.ibmztrialmachines.com/	Administrator	AIz2VqHLNS5S0wVzws4l
Student3	https://T-6556-159-8-176-68.ibmztrialmachines.com/	Administrator	QJ3nr4wht5Rnuq0TN7tt
Student4	https://T-6561-159-8-134-222.ibmztrialmachines.com/	Administrator	F0S4PcBwfd2SamW9hg9r
Student5	https://T-6617-169-50-66-245.ibmztrialmachines.com/	Administrator	LYx6Y6REvLSJn8Su9kOo
Student6	https://T-6618-169-50-66-235.ibmztrialmachines.com/	Administrator	xPuqmxSlOEzX1dimUA5j
Student7	https://T-6619-169-50-66-226.ibmztrialmachines.com/	Administrator	MhrvdeyOElblzh5nkmmR
Student8	https://T-6627-159-8-176-72.ibmztrialmachines.com/	Administrator	P2nYcq0FiQEncRbiTX7V
Student9	https://T-6628-5-10-104-27.ibmztrialmachines.com/	Administrator	41mPfS7ktju1wvVF3m3b

Hands-on Lab 2&3 materials

- Please download the hands-on lab scripts from this github repository.

  https://github.com/arnouldg/SQLDI_HoL_IDUG or

- OpenVPN Credentials : sqladria_20250630_userXX / sqlAdria2025

- Please find the TechZone Jumpbox VMs and SQL DI username for the hands-on lab in the table below

Student	Techzone Image URL	TechZone Password	Windows User/Password	SQLDI User/Password
Student1	https://techzone.ibm.com/my/workshops/student/6840917181445a03dd001168	sqladria2025	Administrator / IBMDem0s	zdw01 / pwd01mop
Student2	https://techzone.ibm.com/my/workshops/student/6840917181445a03dd001168	sqladria2025	Administrator / IBMDem0s	zdw02 / pwd02mop
Student3	https://techzone.ibm.com/my/workshops/student/6840917181445a03dd001168	sqladria2025	Administrator / IBMDem0s	zdw03 / pwd03mop
Student4	https://techzone.ibm.com/my/workshops/student/6840917181445a03dd001168	sqladria2025	Administrator / IBMDem0s	zdw04 / pwd04mop
Student5	https://techzone.ibm.com/my/workshops/student/6840917181445a03dd001168	sqladria2025	Administrator / IBMDem0s	zdw05 / pwd05mop
Student6	https://techzone.ibm.com/my/workshops/student/6840917181445a03dd001168	sqladria2025	Administrator / IBMDem0s	zdw06 / pwd06mop
Student7	https://techzone.ibm.com/my/workshops/student/6840917181445a03dd001168	sqladria2025	Administrator / IBMDem0s	Zdw07 / pwd07mop
Student8	https://techzone.ibm.com/my/workshops/student/6840917181445a03dd001168	sqladria2025	Administrator / IBMDem0s	zdw08 / pwd08mop
Student9	https://techzone.ibm.com/my/workshops/student/6840917181445a03dd001168	sqladria2025	Administrator / IBMDem0s	zdw09 / pwd09mop
Student10	https://techzone.ibm.com/my/workshops/student/6840917181445a03dd001168	sqladria2025	Administrator / IBMDem0s	zdw10 / pwd10mop
Student11	https://techzone.ibm.com/my/workshops/student/6840917181445a03dd001168	sqladria2025	Administrator / IBMDem0s	zdw11 / pwd11mop
Student12	https://techzone.ibm.com/my/workshops/student/6840917181445a03dd001168	sqladria2025	Administrator / IBMDem0s	zdw12 / pwd12mop
Student13	https://techzone.ibm.com/my/workshops/student/6840917181445a03dd001168	sqladria2025	Administrator / IBMDem0s	zdw13 / pwd13mop
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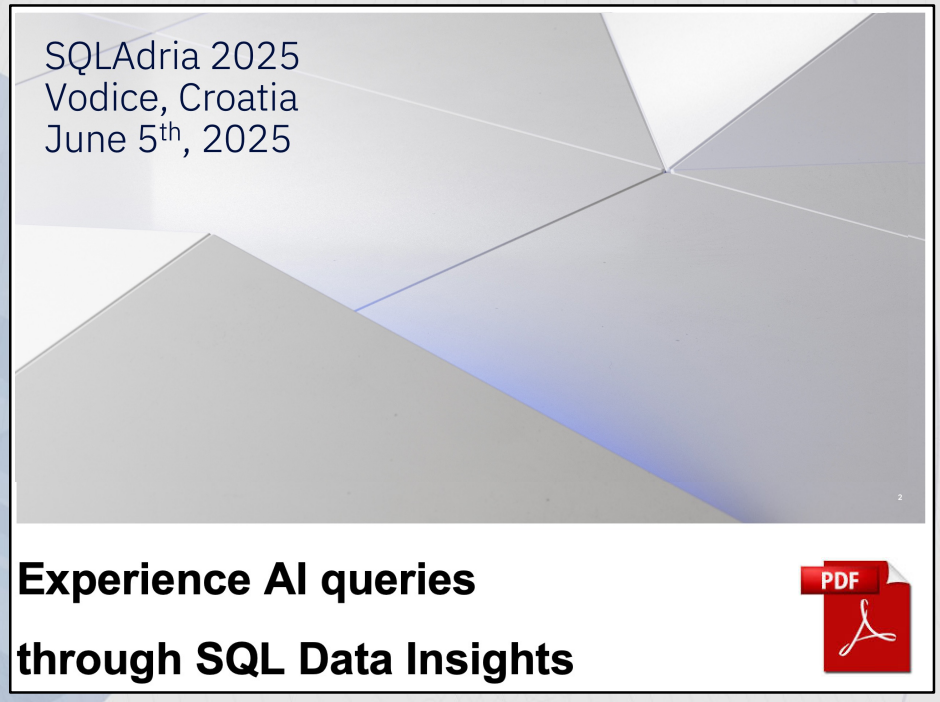
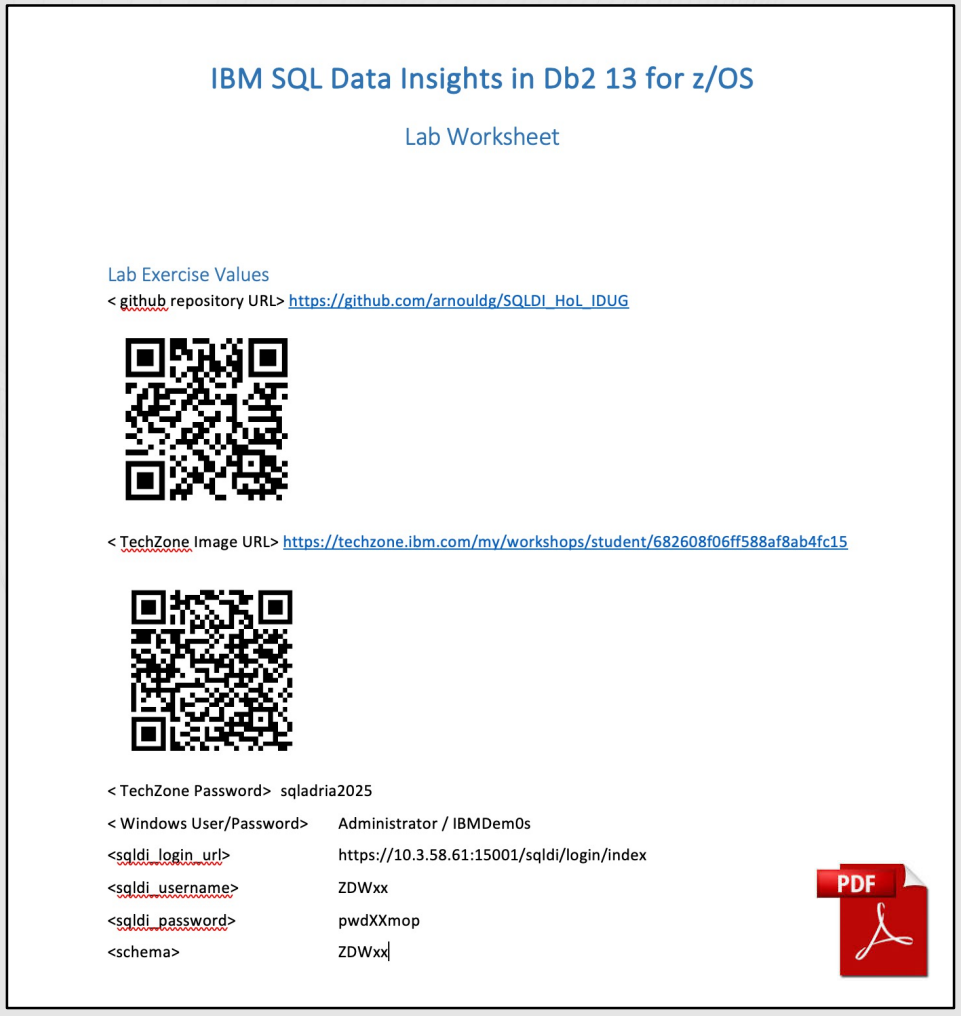
Student15	https://techzone.ibm.com/my/workshops/student/6840917181445a03dd001168	sqladria2025	Administrator / IBMDem0s	zdw15 / pwd15mop
Student16	https://techzone.ibm.com/my/workshops/student/6840917181445a03dd001168	sqladria2025	Administrator / IBMDem0s	zdw16 / pwd16mop
Student17	https://techzone.ibm.com/my/workshops/student/6840917181445a03dd001168	sqladria2025	Administrator / IBMDem0s	zdw17 / pwd17mop
Student18	https://techzone.ibm.com/my/workshops/student/6840917181445a03dd001168	sqladria2025	Administrator / IBMDem0s	zdw18 / pwd18mop
Student19	https://techzone.ibm.com/my/workshops/student/6840917181445a03dd001168	sqladria2025	Administrator / IBMDem0s	zdw19 / pwd19mop
Student20	https://techzone.ibm.com/my/workshops/student/6840917181445a03dd001168	sqladria2025	Administrator / IBMDem0s	Zdw20 / pwd20mop

Hands-On-Lab Workbook & Credentials provided by Instructors





HOL Parts

Uncover insights based on hidden relationships in Db2 data with AI

1. SQL Data Insights overview

AI Semantic Built-In Functions

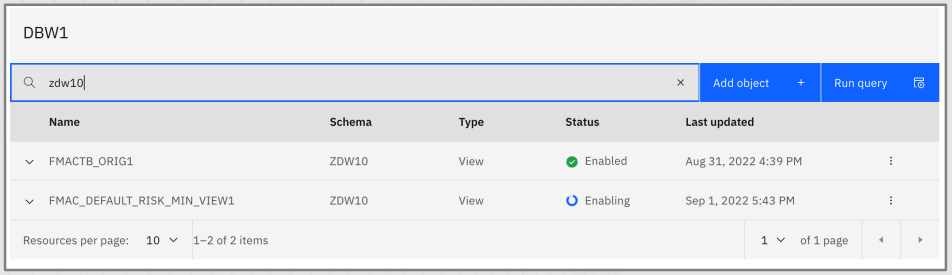
- AI_SIMILARITY
- AI_SEMANTIC_CLUSTER
- AI_ANALOGY

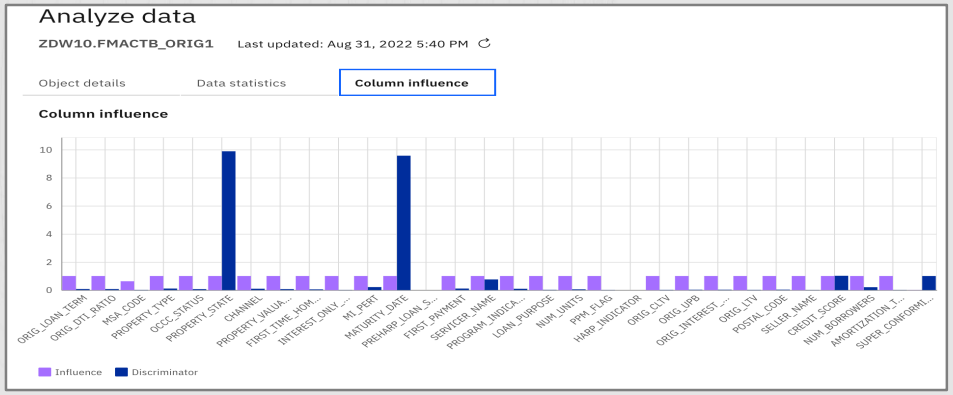
2. LAB Exercises Preparation

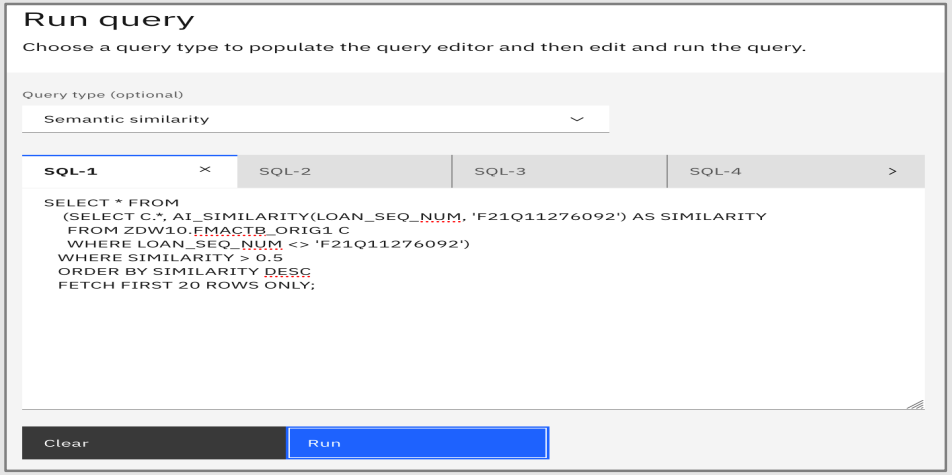
3. Accessing SQL Data Insights UI

- Connecting to your database
- Enable AI
- Monitor object training
- Review training results and interpretability

5. Run Semantics queries







For your readings,

What is SQL Data Insights and why you should know it

By Catherine Wu posted 5 days ago

2 Like

By Catherine Wu and Guanjun Cai

Imagine a world where a database management system does not just simply retrieve and store data. With the integration of advanced AI technology, Db2 for z/OS can now delve deep into your data, exposing unseen relationships between columns and rows and offering insights through SQL-based AI queries. This groundbreaking fusion where AI meets Db2 is called SQL Data Insights (SQL DI). If your critical applications rely heavily on Db2 for z/OS and the data continues to reside in Db2, it's imperative to know everything about SQL DI. Utilize its strength to fully unlock the potential of your core data assets.

So, how does SQL DI set itself apart from traditional machine learning when leveraging data that reside in Db2?

https://community.ibm.com/community/user/datamanagement/blogs/catherine-wu/2023/10/13/what-is-sql-data-insights-and-why-you-should-know?CommunityKey=621c2a2a-01f9-4b57-992f-36ed7432e3bb

Unraveling patterns and relationships in your Db2 for z/OS data: A simple example for getting started with SQL Data Insights

6 hours ago

Guanjun Cai

SQL Data Insights (SQL DI) is a new feature that is built into the Db2 for z/OS engine. The feature combines deep learning in artificial intelligence (AI) with advanced IBM Z technologies to infuse the Db2 engine with SQL-based semantic queries on user tables and views. To put it simply, SQL DI uses a database embedding technique to train a neural network model on a Db2 table or view and then deploys the model natively to discover patterns and relationships that are otherwise hidden in the columns and rows.

https://community.ibm.com/community/user/datamanagement/viewdocument/unraveling-patterns-and-relationshi?CommunityKey=621c2a2a-01f9-4b57-992f-36ed7432e3bb