

The Teradata logo is displayed in the top right corner in a dark blue, lowercase sans-serif font. A small orange circle is positioned at the end of the word.

teradata.

A silhouette of a person is captured mid-jump, leaping over a dark gap between two rock formations. The background is a bright orange sunset sky with a glowing sun positioned directly below the person's feet.

**The Future of Data, Analytics  
and Machine Learning**



## Christopher Jackson

Solution Engineering Manager,  
South Asia & Pacific

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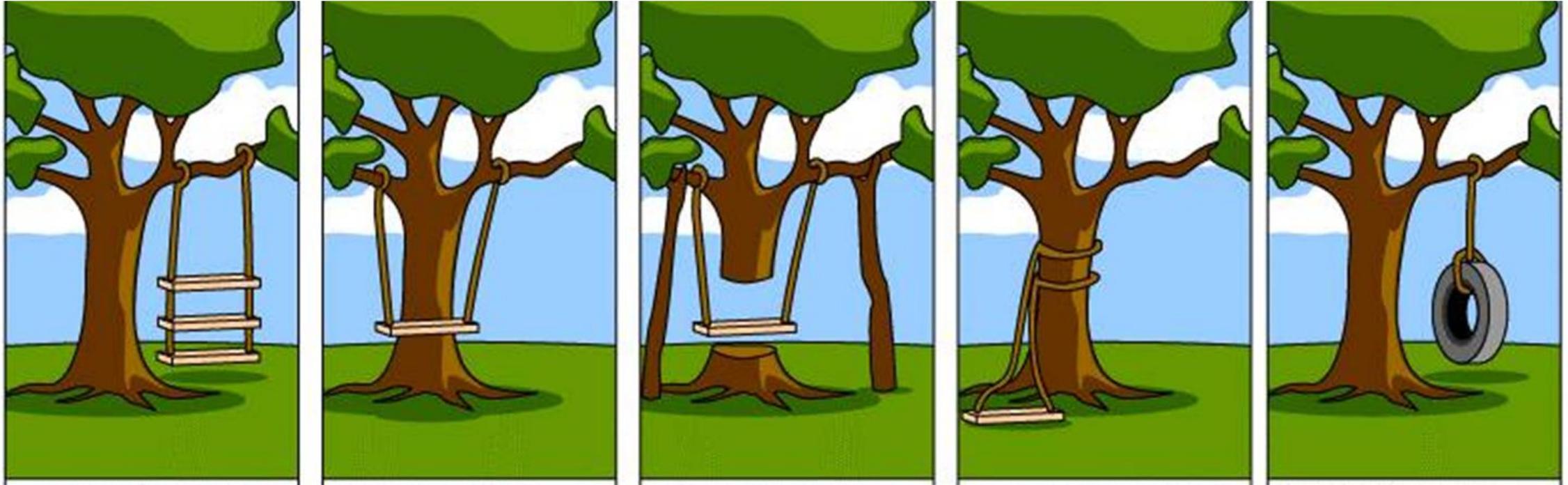
[linkedin.com/in/cjusa](https://www.linkedin.com/in/cjusa)

**teradata.**

# My Work Bio

- First Job: White House Complex – Office of Management & Budget, Ronald Reagan White House (1984)
- Craziest Job: Wrote Video Games
- More than 35 years of data and analytics experience in finance, banking, transportation, construction, manufacturing, and
- 5 Years at Teradata (mostly in Singapore)
- Now leading the pre-sales team for Teradata in South Asia & Pacific
- Currently based in Jakarta Indonesia

# What does Pre-Sales Engineering do?



**Customer  
Requirements**

**Pre-Sales**

**Proposed  
Solution**

# Key Takeaways

## The Future of Data, Analytics & Machine Learning

1

Teradata's vision for managing the continuous disruption with a **sentient enterprise** and our **Vantage products**

2

How **analytics and data science** can be used to solve real-world problems at-scale in enterprises

3

What **free learning resources** Teradata makes available to students and professors

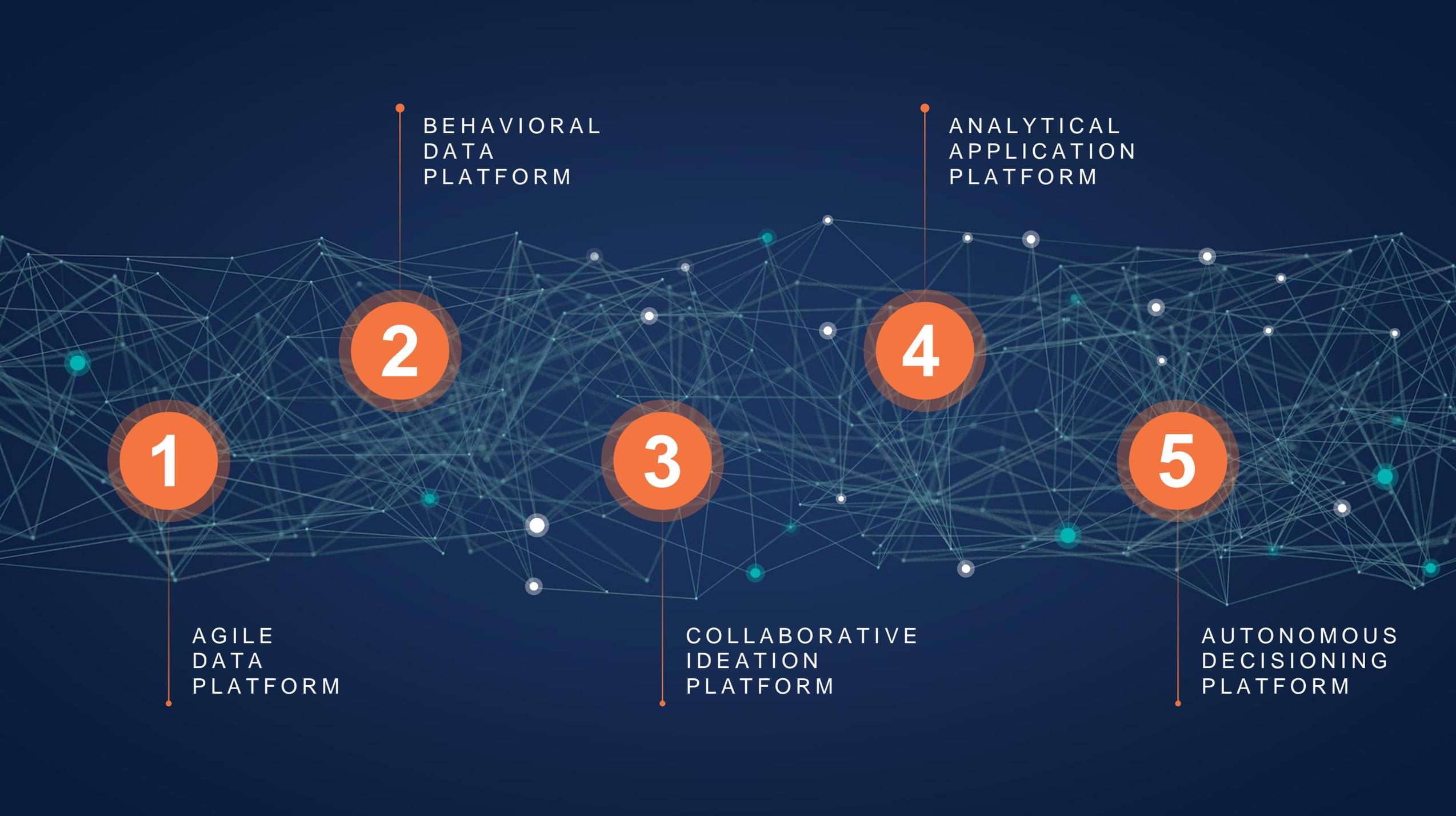
# Agenda

- **The Sentient Enterprise** – Our Vision for Disruptive Analytics at Scale
- **3 Customer Success Stories** – SwedBank, AirFrance-KLM, & BWM Group
- **Role of Analytics in the Modern Enterprise**
- **Teradata Vantage & Roadmap**
- **A Day in the Life of a Data Scientist**
- **Two More Customer Successes** – General Motors & Larry H. Miller Enterprises (Utah Jazz Professional Basketball Team)
- **Teradata University Network** – Free Education Resources including Competitions and Student Events



# THE SENTIENT ENTERPRISE

ANALYTIC INNOVATION FOR THE FUTURE



BEHAVIORAL  
DATA  
PLATFORM

ANALYTICAL  
APPLICATION  
PLATFORM

2

4

1

3

5

AGILE  
DATA  
PLATFORM

COLLABORATIVE  
IDEATION  
PLATFORM

AUTONOMOUS  
DECISIONING  
PLATFORM

THE SENTIENT  
ENTERPRISE  
**JOURNEY**

**ORGANIZATIONAL  
HURDLES**

**TECHNOLOGY  
ADVANCEMENTS**

**DATA  
ANARCHY**

**COMPANY  
DISRUPTION**





**RETAIN DATA  
AGILITY AT SCALE**  
AGILE DATA PLATFORM

**UNDERSTAND BEHAVIOR  
AND INTERACTIONS**  
BEHAVIORAL DATA PLATFORM



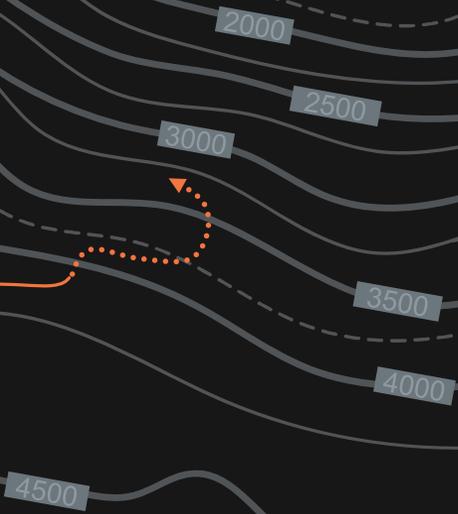
**INNOVATE AND  
WORK TOGETHER**  
COLLABORATIVE  
IDEATION PLATFORM



**TURN INSIGHT  
INTO ACTION**  
ANALYTICAL  
APPLICATION  
PLATFORM



**RELY ON  
SELF-DECISIONING**  
AUTONOMOUS  
DECISIONING PLATFORM



# BEHAVIOR

UNDERSTAND AND INTERACTIONS

Use patterns and context in human and machine behavior to predict performance and inform new strategies.

BEHAVIORAL DATA PLATFORM

ASK YOURSELF

2000

3000

4500

5000

5500

6000

**HOW** can you predict what customers are likely to do in the future and determine what your company's next logical step?

**HOW AND WHERE** do you capture and store all of your machine and telemetry data?

**WHAT** changes would be required to your sales and marketing efforts if you understood non-buying behavior?

**HOW** do you know what people are saying about your company, products, and brand?

**HOW** might you use data to make the most of every customer touch point?

**HOW** would you use a wide variety of rich behavioral data—both human and machine related—to better understand problems and spot opportunities?

# DECISIONING

RELY ON SELF

Use algorithms to make independent decisions so the enterprise can grow and operate at scale.



STAY FOCUSED ON  
**AGILITY**



FIND SUCCESS IN

**REPEATABILITY**

A top-down photograph of two white paper napkins on a rustic wooden table. The napkins are slightly overlapping. The left napkin has the word "DISRUPT" written in a bold, black, hand-drawn font. The right napkin has the words "BE DISRUPTED" written in the same style, with a thick black underline beneath the word "DISRUPTED". In the upper left corner, the bottom of two glasses filled with a dark red liquid, likely wine, is visible. The wooden table has a prominent grain and a knot hole.

DISRUPT

BE  
DISRUPTED

The Teradata logo is displayed in white lowercase letters on a teal circular background. The teal background is a semi-circle on the left side of the slide, with a dark blue background on the right.

teradata.

## 3 Customer Success Stories

Companies have challenges, problems,  
and questions.

Teradata has the answer.

# BMW Group's Answer

**3M+**  
**Parts**

Every point in a supply chain produces data, adding up to massive volumes of valuable information that can be used to understand the entire logistical and supply chain system. Teradata Vantage integrates disparate data from all available sources.



# SWEDBANK'S ANSWER:



**1.7B**

**Digital customer interactions per year**

Stitching together 1.7B digital customer interactions per year to illuminate the customer journey, Swedbank, the leading digital bank in Scandinavia, delivers on its mission to enable people, businesses, and society to grow.

**AIR FRANCE-KLM GROUP'S ANSWER:**

**100M**

**Smoothly connected  
passengers**

Air France-KLM Group  
relies on Teradata Vantage  
to identify promotion and  
pricing opportunities,  
manage churn, and  
optimize web and call  
center experiences



# The Role of Advanced Analytics in the Modern Enterprise

# When Will AI Exceed Human Performance? Evidence from AI Experts

Katja Grace<sup>1,2</sup>, John Salvatier<sup>2</sup>, Allan Dafoe<sup>1,3</sup>, Baobao Zhang<sup>3</sup>, and Owain Evans<sup>1</sup>

<sup>1</sup>Future of Humanity Institute, Oxford University

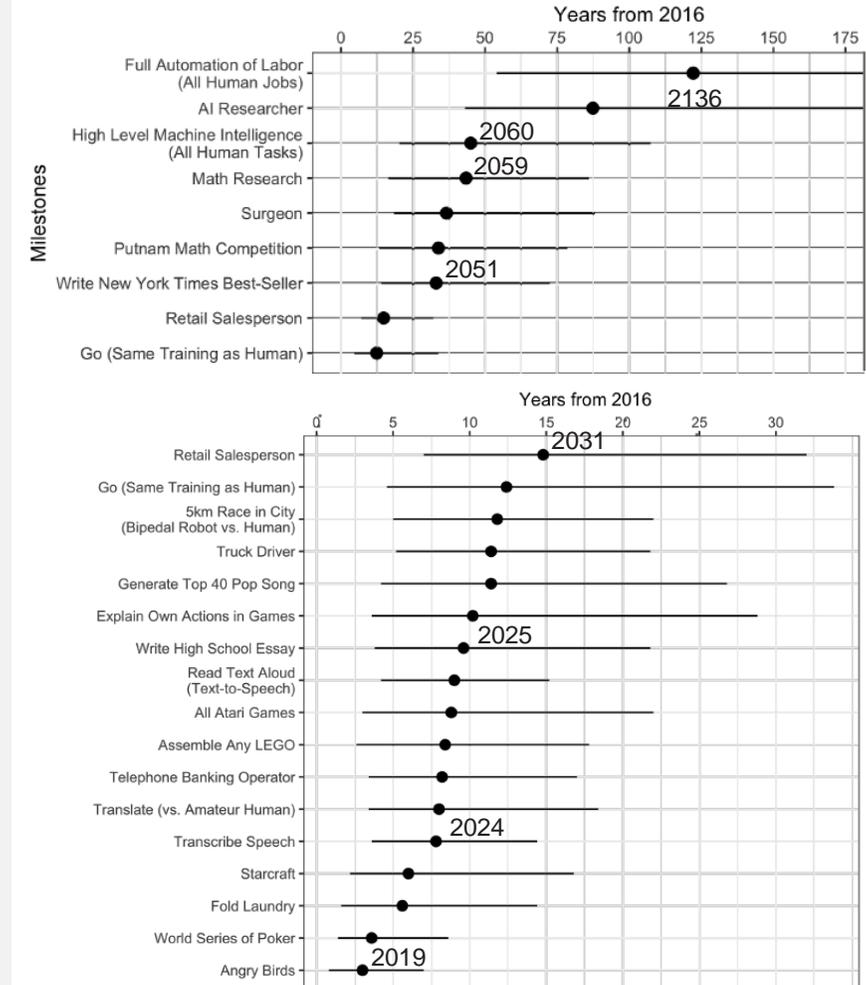
<sup>2</sup>AI Impacts

<sup>3</sup>Department of Political Science, Yale University

### Abstract

Advances in artificial intelligence (AI) will transform modern life by reshaping transportation, health, science, finance, and the military [1, 2, 3]. To adapt public policy, we need to better anticipate these advances [4, 5]. Here we report the results from a large survey of machine learning researchers on their beliefs about progress in AI. Researchers predict AI will outperform humans in many activities in the next ten years, such as translating languages (by 2024), writing high-school essays (by 2026), driving a truck (by 2027), working in retail (by 2031), writing a bestselling book (by 2049), and working as a surgeon (by 2053). Researchers believe there is a 50% chance of AI outperforming humans in all tasks in 45 years and of automating all human jobs in 120 years, with Asian respondents expecting these dates much sooner than North Americans. These results will inform discussion amongst researchers and policymakers about anticipating and managing trends in AI.

N = 352 respondents / 1634 contacted



**Computer automation is coming in your lifetime!**

# Journey in Analytics



**Descriptive Analytics**  
Understand past events

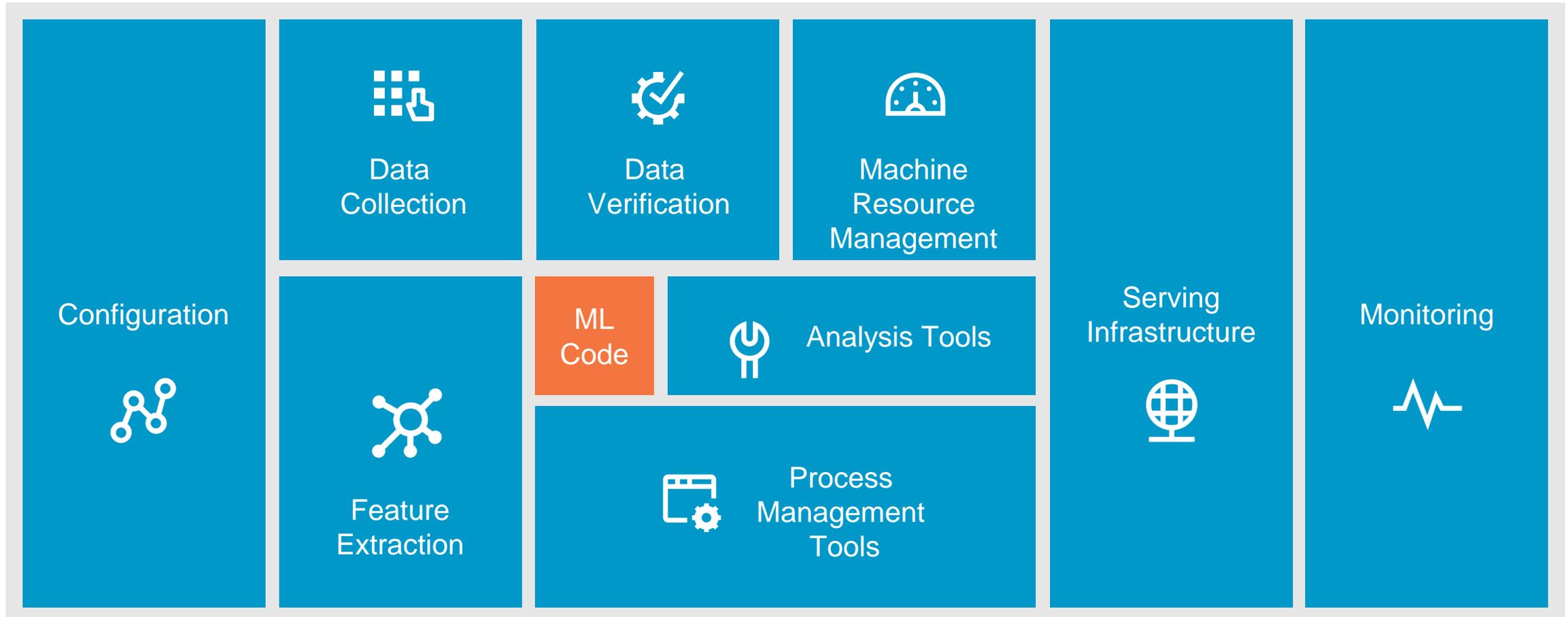
**Predictive Analytics**  
Identify best option

**Prescriptive Analytics**  
Automate business decision

# The Role of Machine Learning Systems in the Enterprise

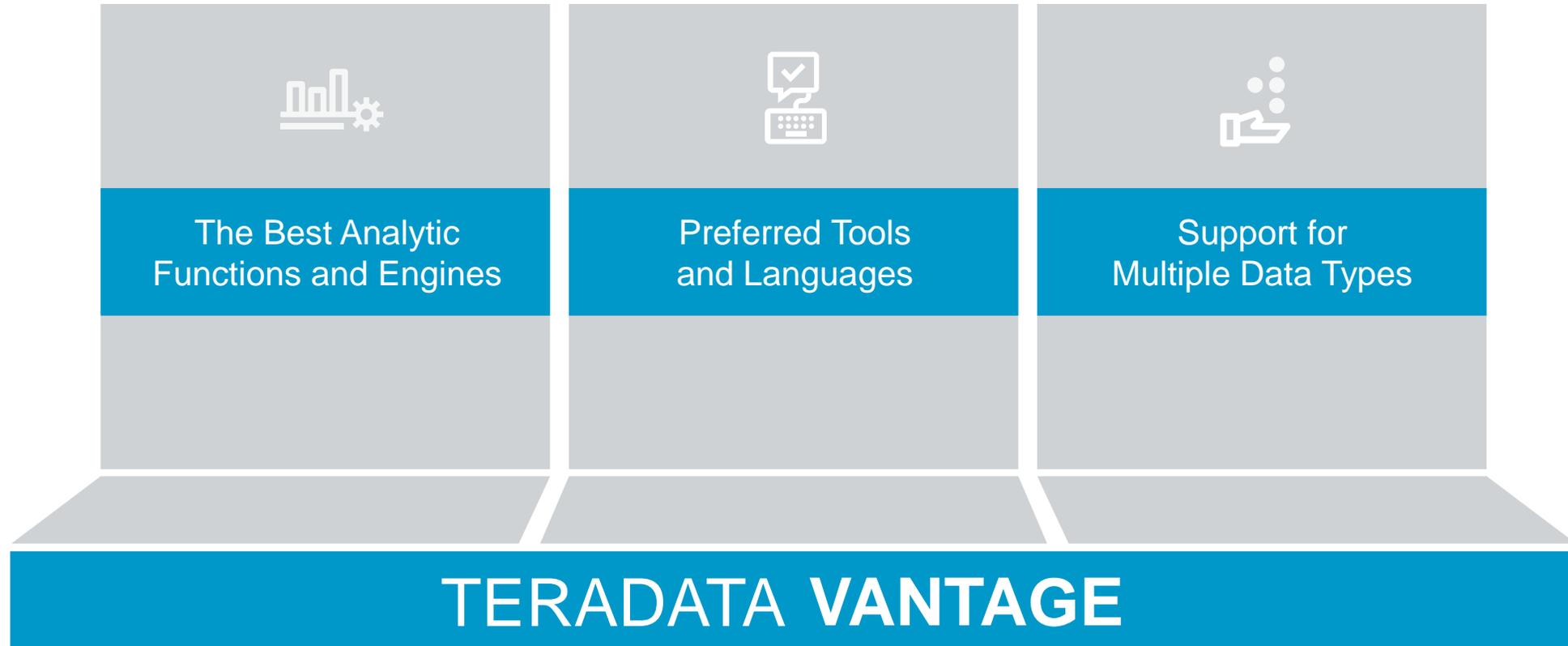


# Teradata Vantage is Uniquely Positioned for Machine Learning Systems



Source: <https://papers.nips.cc/paper/5656-hidden-technical-debt-in-machine-learning-systems.pdf>

# The Solution: Teradata Vantage



# Teradata Vantage

The New Approach a New World of Data Demands

# Benefits of Teradata Vantage



Simple



Best engine  
for each job



Scalable



Integrated user  
experience



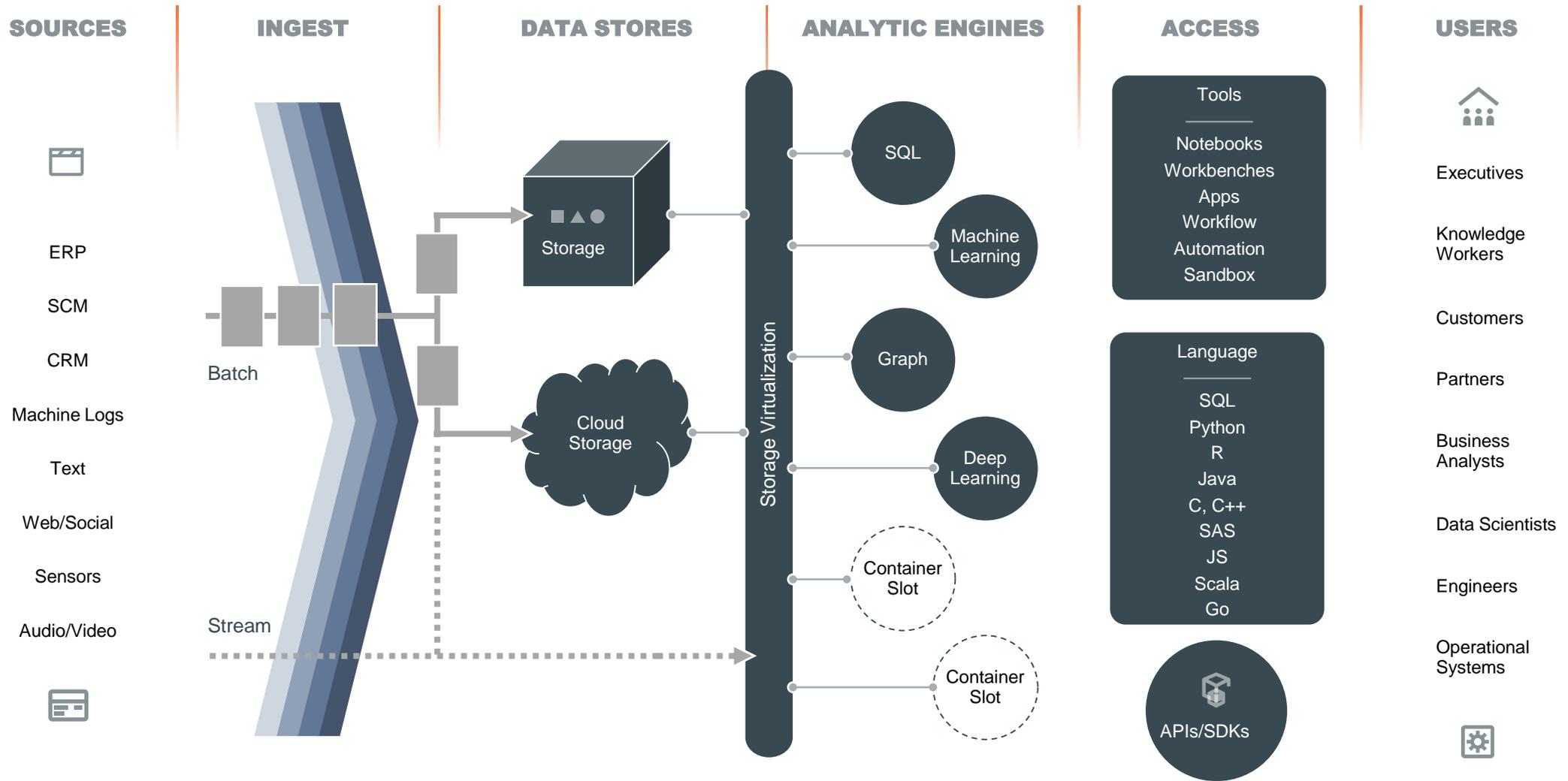
Minimizes data  
movement



Enterprise  
ready



# ANALYTICAL ECOSYSTEM



**Analytic Process** Discover >>> Access >>> Prepare >>> Analyze >>> Recommend >>> Deploy >>> Socialize >>> Monitor

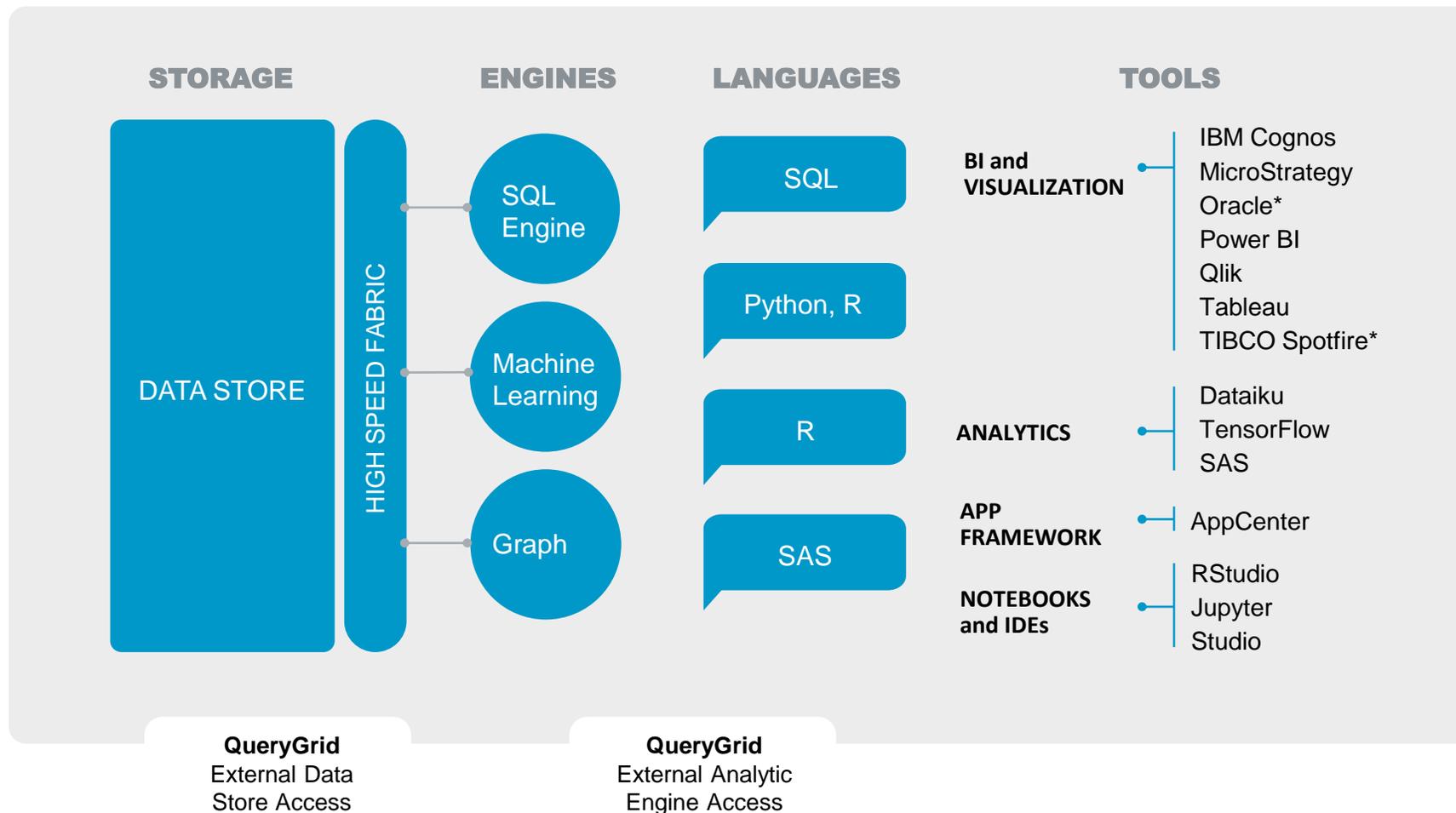
**Deployment**

ON-PREMISES

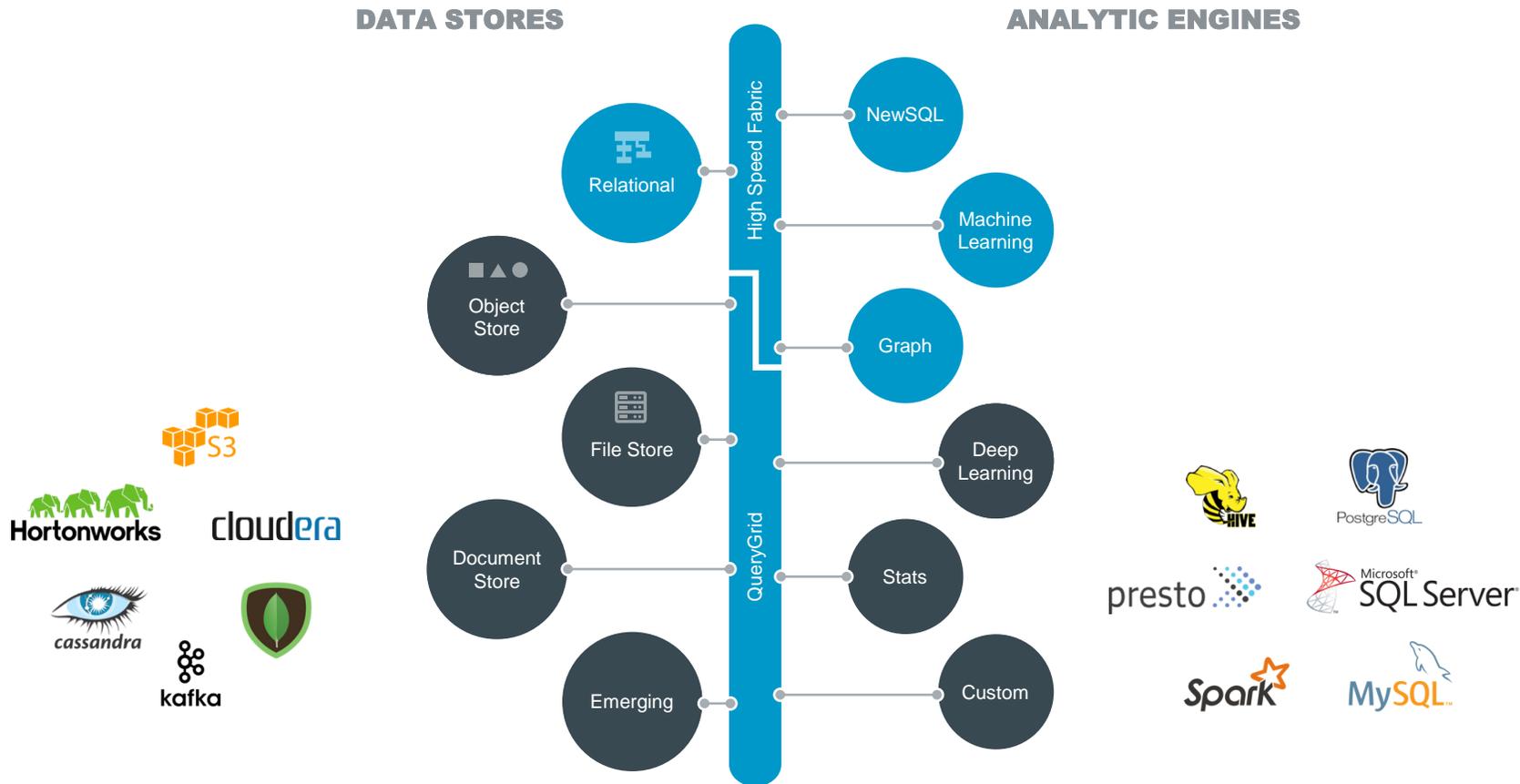
CLOUD

HYBRID

# Teradata Vantage (2019)



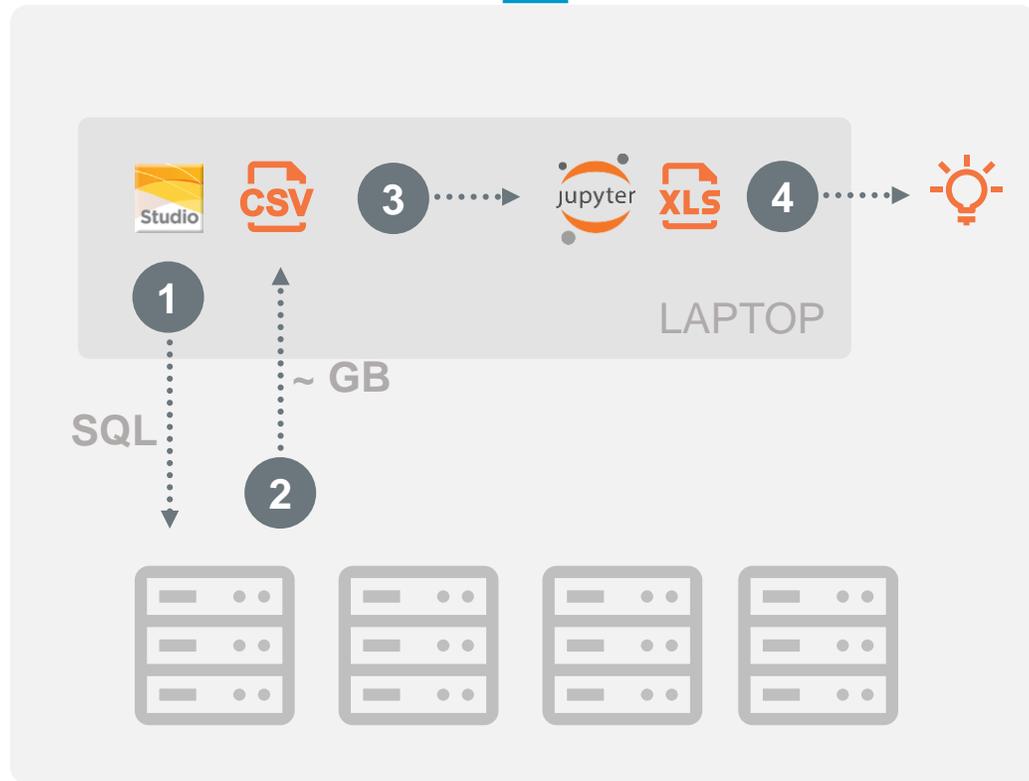
# Open Ecosystem Connectivity with QueryGrid™



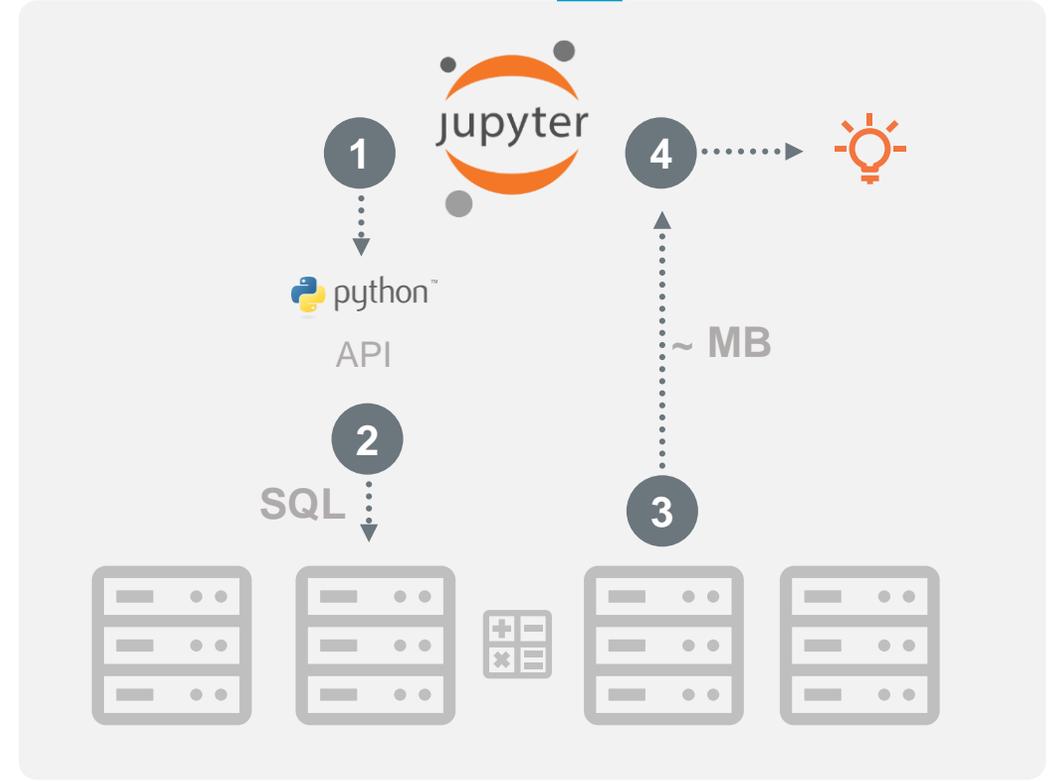
- Minimize data movement and duplication
- Process data where it resides
- Scalable data transfer with push-down processing

# Vantage—the Foundation for Enterprise Scale and Performance Through In-Database Advanced Analytics

Traditional Analytics 



In-Database Analytics 



# In-Database Analytics Power

Local R Script

**240**  
minutes



In-Database R Script

**10**  
minutes

## Local R script (pseudo-code)

```
library(dplyr)
library(dbplyr)
con <- DBI::dbConnect(odbc::odbc(), Driver = "Teradata",
  DBCName=host, UID=uid, PWD=pwd, database=dbs)
my_dataframe <- tbl(con, "my_table")
my_data <- my_dataframe %>% select(y,x1,x2,x3)
results <- glm(y ~ x1 + x2 + x3, data=my_data)
```

## In-Database R Script (pseudo-code)

```
SELECT * FROM SCRIPT (
  ON (SELECT Y, X1, X2, X3 FROM my_table)
  PARTITION BY 1
  SCRIPT_COMMAND(' R CMD BATCH ./mydb/analysis.R')
  DELIMITER(',')
) as tbl;
```

# In-Database Analytics Power

**6 HOURS**

Download users data

**~10 MIN**

Local Churn Analysis

**6 HOURS**

Upload churn prediction  
by user



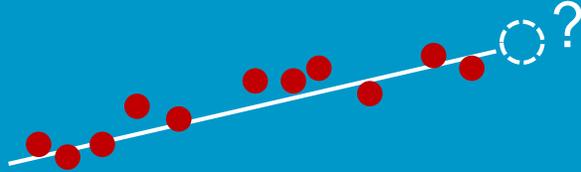
**~4 MIN**

Churn Analysis  
in-database

- Faster results
- Iterate more often
- Fresher business insights
- Fail faster
- Better governance  
(monitor, audit, backup, ...)

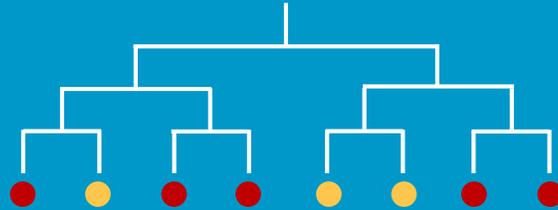
# Discover the Possibilities with the Teradata Vantage 1.0

## Prediction



- How much revenues will we have next month?

## Segmentation



- Which prospects are the more likely to purchase our product?

## Understanding Causality



- Which customer events are the most important to drive a sale?

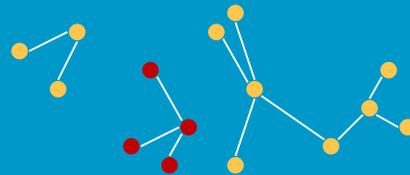
## Text Mining

Re: Investment question

I can **guarantee** you a **return on investment** of 10%, if you **open** a **new saving account** with ACME Bank Inc. before the end of the month.

- Which offers include non-compliant terms?

## Networking



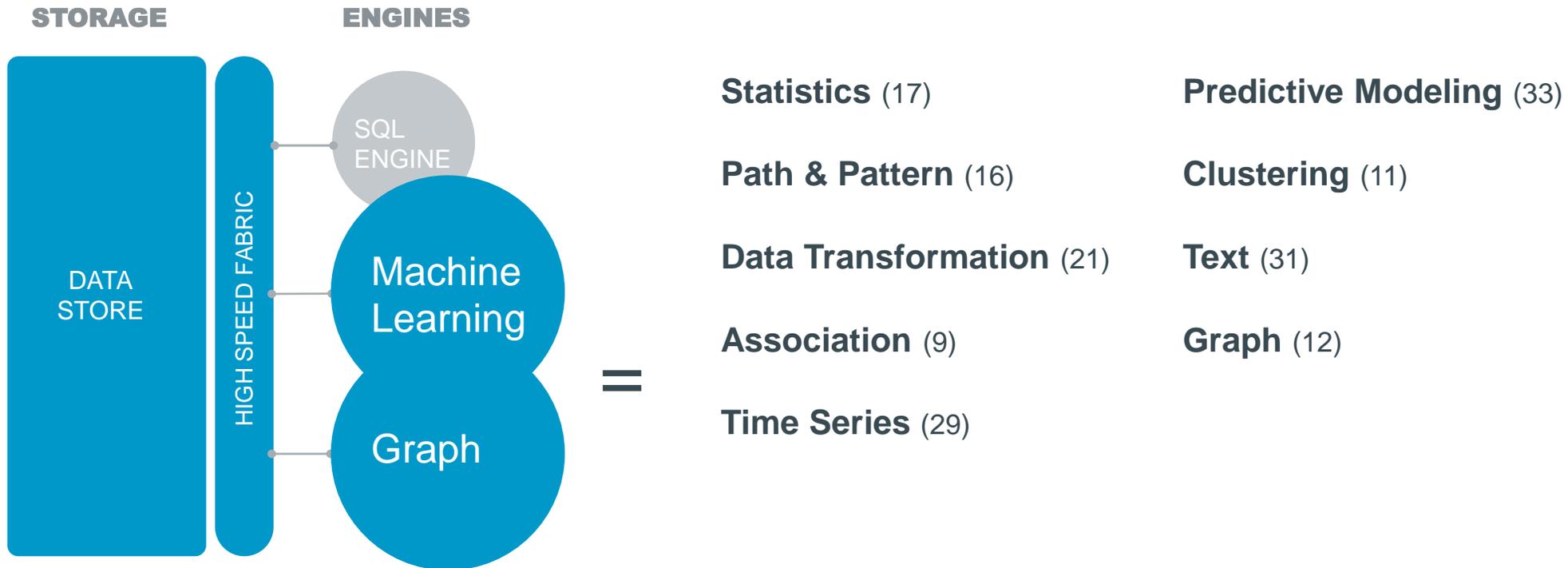
- Which customers are likely to be fraudsters?

## Hypothesis testing



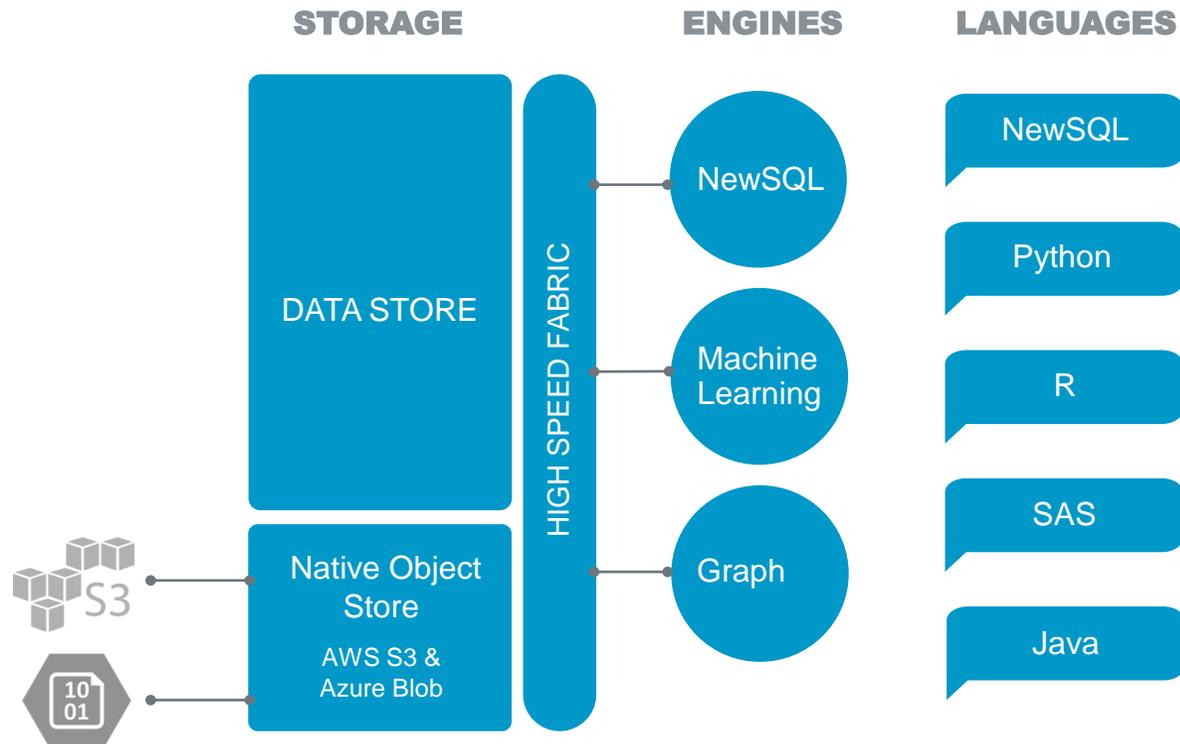
- Does our new website generate significantly more leads?

# Machine Learning and Graph Engine Functions



# Future Roadmap of Teradata Vantage

# Teradata Vantage Native Object Store Access

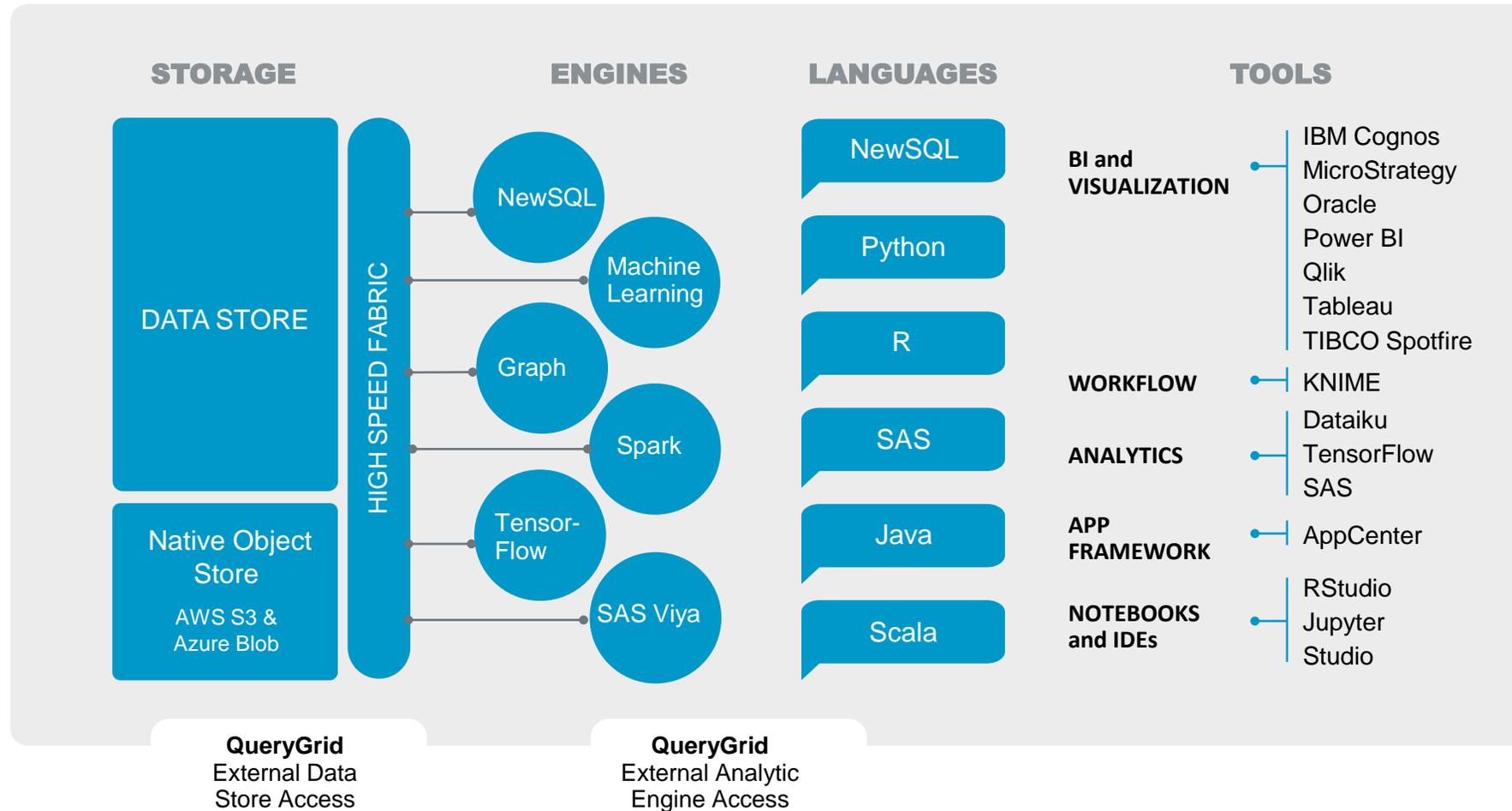


Teradata SQL engine natively accesses external object stores

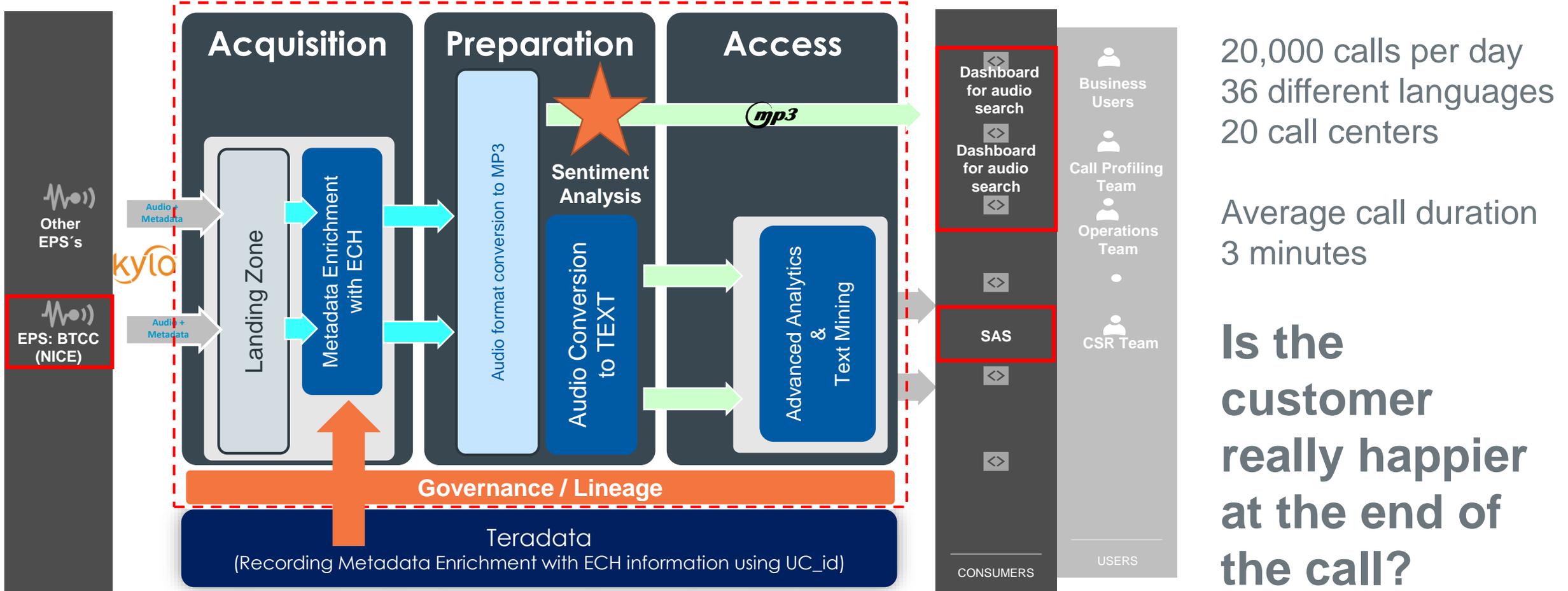
Run SQL queries and joins across structured and semi-structured data

Answer more business questions than ever before

# Teradata Vantage – Future (2020+)

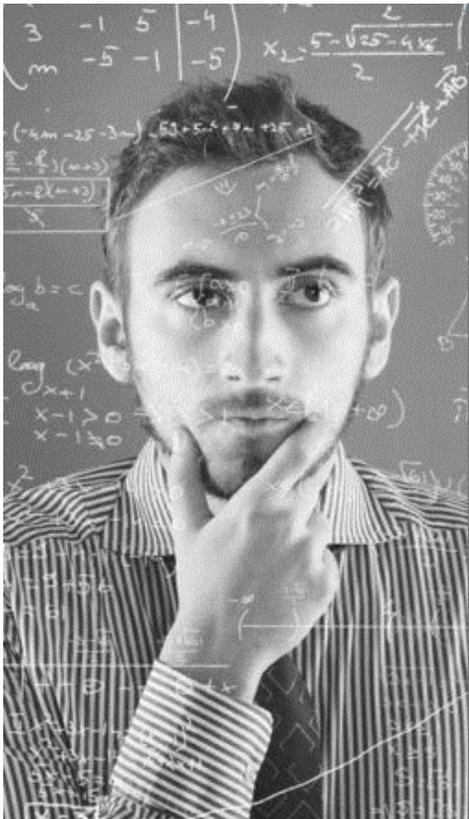


# Sample Real-World Request - Call Center Analytics



# Day in the Life of a Data Scientist

# Day-in-the-life of a Data Scientist: What Gems Can We Find in Our Customer Reviews?



1	Launch Jupyter on AppCenter* Single Node, up to 36 Cores, 3 GPU*, 1.5 TB memory**	Powerful workbench
2	Load customer reviews on Amazon Video from S3 into DataLab (custom space)	Easy ingest
3	Benefit from JSON parsing data manipulation to clean the data in-database at scale	Simple transformation
4	Run Text Mining to understand hot keywords and relationship between reviews using Cosine Similarity	Preferred methodology at scale
5	Develop a micro-app for marketing to visualize recent reviews in a graph to improve marketing campaigns	Share my findings

\* Considered option for the future

\*\* Technical maximal limit

# Deep Dive Example: Clustering of Movie Reviews Using Text Clustering and Graph

Amazon Prime Video Show Reviews (JSON) from UCSD

What insights & hidden gems are in the review text?

```

json
{"reviewerID": "A11N155CW1UV02", "asin": "B000H00VBQ", "reviewerName": "AdrianaM", "helpful": [0, 0], "reviewText": "I had big expectations because I love Eng
{"reviewerID": "A1PG2VV4W1WRPL", "asin": "B000H0X790", "reviewerName": "Jimmy C. Saunders \"Papa Smurf\"", "helpful": [0, 0], "reviewText": "It beats watching
{"reviewerID": "A3RXD7Z44T9DHW", "asin": "B000H0X790", "reviewerName": "Kansas", "helpful": [0, 0], "reviewText": "This is the best of the best comedy Stand-
{"reviewerID": "AUX8EUBNTHIU", "asin": "B000H0X790", "reviewerName": "Louis V. Borsellino", "helpful": [0, 0], "reviewText": "Not bad. Didn't know any of the co
{"reviewerID": "AXM3GQLD0CHIL", "asin": "B000H0X790", "reviewerName": "Ray Shiva", "helpful": [0, 0], "reviewText": "Funny, interesting, a great way to pass time
{"reviewerID": "A39F2EW27YYUDM", "asin": "B000H29TXU", "reviewerName": "Emily Booth", "helpful": [0, 0], "reviewText": "Watched it for Kevin Hart and only Kev
{"reviewerID": "AO1Z63O9CTT95", "asin": "B000H29TXU", "reviewerName": "James Westervelt", "helpful": [0, 0], "reviewText": "he's OK. His humor consists mainly
{"reviewerID": "A2JE0JY1ZL5NU4", "asin": "B000H2DMME", "reviewerName": "C. A. Neal", "helpful": [0, 0], "reviewText": "I only watched the Wanda Sykes portion o
{"reviewerID": "A2LSZFEFTDRDIJ", "asin": "B000H2DMME", "reviewerName": "debra marrero", "helpful": [0, 0], "reviewText": "Enjoyed some of the comedians, it wa
{"reviewerID": "AAWV26JJ1SGS0", "asin": "B000H2DMME", "reviewerName": "Margaret G. Louk \"loves music\"", "helpful": [0, 0], "reviewText": "There were some go
{"reviewerID": "AXM3GQLD0CHIL", "asin": "B000H2DMME", "reviewerName": "Ray Shiva", "helpful": [0, 0], "reviewText": "Great variety of good comics. Each show i
{"reviewerID": "AYCGI5JRRISTJ", "asin": "B000H2DMME", "reviewerName": "Roger Keith Ing", "helpful": [0, 0], "reviewText": "I loved the humor of the stand-up comi
{"reviewerID": "A1939G7KOLLQ8P", "asin": "B000H2DMME", "reviewerName": "Rugby", "helpful": [0, 0], "reviewText": "It was fine - not my favorite but a comic on h
{"reviewerID": "A3DG93E8TXMKZF", "asin": "B000H4YNM0", "reviewerName": "BytemanProofreader at Gmail \"JohnnyWill\"", "helpful": [1, 2], "reviewText": "This is a
{"reviewerID": "ALLV1OUJL3WN6", "asin": "B000H4YNM0", "reviewerName": "Chad A. Barts \"Chadillac\"", "helpful": [0, 0], "reviewText": "Season 2 of It's Always Su.
{"reviewerID": "ALZWY9L4E5GXO", "asin": "B000H4YNM0", "reviewerName": "Donna Smith", "helpful": [0, 0], "reviewText": "Got these for my son's birthday. He say
{"reviewerID": "A2WDV8ACOG5LSA", "asin": "B000H4YNM0", "reviewerName": "Elisa Bohanan", "helpful": [0, 0], "reviewText": "The show is a little bit dry, but is def
{"reviewerID": "A1NF9WS7RR82MX", "asin": "B000H4YNM0", "reviewerName": "J. Hill", "helpful": [0, 0], "reviewText": "Out of all the new comedies that have come
{"reviewerID": "AL6Q4IIX5MFQZ", "asin": "B000H4YNM0", "reviewerName": "John_in_NC", "helpful": [0, 0], "reviewText": "It's basically a slightly less intelligent versi
{"reviewerID": "A2QWF2BJ2FM4R2", "asin": "B000H4YNM0", "reviewerName": "Lovblad", "helpful": [0, 0], "reviewText": "This series revolves around 4 friends who i
{"reviewerID": "ATECU14VUIOJO", "asin": "B000H4YNM0", "reviewerName": "Miss Barbara", "helpful": [0, 0], "reviewText": "I was pleasantly surprised with this \"out
{"reviewerID": "A3RA13OPEIKLQ9", "asin": "B000H4YNM0", "reviewerName": "N. Dillon \"International reader\"", "helpful": [0, 0], "reviewText": "I wish I were a part of
{"reviewerID": "AHYJONISOLE1X", "asin": "B000H4YNM0", "reviewerName": "NoPushover", "helpful": [0, 0], "reviewText": "I heard about It's Always Sunny from a Ke
{"reviewerID": "A210AQRLS6OAW3", "asin": "B000H4YNM0", "reviewerName": "Scott Towers", "helpful": [0, 0], "reviewText": "Fan-tastic. This is a show about territ
{"reviewerID": "A3UKF6Q4NCPQR3", "asin": "B000H4YNM0", "reviewerName": "Sydney Domville", "helpful": [0, 0], "reviewText": "I love this show and I don't think t.
{"reviewerID": "A9M4HRJ4P6G5A", "asin": "B000H4YNM0", "reviewerName": "XbroknlegsX", "helpful": [0, 0], "reviewText": "I love it's always sunny and wanted to o
{"reviewerID": "A5M1M9IJEQ8J2", "asin": "B000H4YNM0", "reviewerName": "Bill E. Bissett", "helpful": [0, 0], "reviewText": "Non stop action with edge of your seat t
{"reviewerID": "AD342OQX4EFN7", "asin": "B000H4YNM0", "reviewerName": "Donkey", "helpful": [0, 0], "reviewText": "I had a hard time following this show when it

```

amazon\_raw (table)

# Benefit from JSON parsing data manipulation to clean the data in-database at scale

```
CREATE TABLE demo.amazon_reviews_ubjson (  
  id INTEGER,  
  bson_data JSON(5000) STORAGE FORMAT UBJSON  
)  
PRIMARY INDEX(id);  
  
INSERT INTO demo.amazon_reviews_ubjson VALUES(2814, '{' ||  
  "reviewerID" : "A3JNY2MSXKTZXW", ' ||  
  "asin_number" : "B0012QRPU4", ' ||  
  "reviewerName" : "Jerry D. Mills", ' ||  
  "reviewText" : "Enjoy it so far but Ive not yet finished the series. Anxious for the next seson season good or bad", ' ||  
  "overall" : "4", ' ||  
  "reviewSummary" : "different", ' ||  
  "unixReviewTime" : "1389139200."' ||  
  '});  
  
SELECT  
  bson_data.reviewerID AS reviewerID,  
  bson_data.reviewText AS reviewText  
FROM  
  demo.amazon_reviews_ubjson;
```

# Transform Text to Vector Space Model (TF/IDF)

Term Frequency (i.e. how often occurs the term in this document) (e.g. 1 / 28 = 0.0357...)

Inverse Document Frequency (i.e. how rare is the term across all document, inverse of likelihood to find a document with this term)

docid	term	frequency
0	i	2
0	investigative	1
0	had	1
0	didn't	1
0	guy	1
0	big	1
0	to	1
0	because	1
0	boring	1
0	me	1
0	in	1
0	this	1
0	but	1
0	tv	1
0	all	1

docid	term	tf	idf	tf_idf
0	boring	0.0357142857...	4.0878834531...	0.1459958376...
0	tv	0.0357142857...	2.5887623727...	0.0924557990...
0	in	0.0357142857...	0.9412510094...	0.0336161074...
0	is	0.0357142857...	0.5835293875...	0.0208403352...
0	at	0.0357142857...	1.8749105188...	0.0669610899...
0	investigative	0.0357142857...	7.3114541222...	0.2611233615...
0	detective	0.0357142857...	4.3577700849...	0.1556346458...
0	didn't	0.0357142857...	3.0562586876...	0.1091520959...
0	it	0.0357142857...	0.5985693986...	0.0213774785...
0	this	0.0357142857...	0.4907957854...	0.0175284209...
0	all	0.0357142857...	1.5168277548...	0.0541724198...
0	because	0.0357142857...	2.5108139066...	0.0896719252...
0	and	0.0357142857...	0.3037470460...	0.0108481087...
0	me	0.0357142857...	2.0078566026...	0.0717091643...
0	i	0.0714285714...	0.4668892539...	0.0333492324...
0	english	0.0357142857...	5.1012423494...	0.1821872267...

TF\*IDF: how peculiar is this term in this document

## 1 nGram function "split the words"

```
SELECT
  id AS docid,
  ngram AS term,
  frequency
FROM nGram@coprocessor (
  ON (SELECT id, bson_data.reviewtext AS reviewtext FROM demo.amazon_reviews_ubjson)
  USING
    TextColumn ("reviewtext")
    Grams ('1')
) AS Tbl;
```

## 2 TF\_IDF function "words statistics"

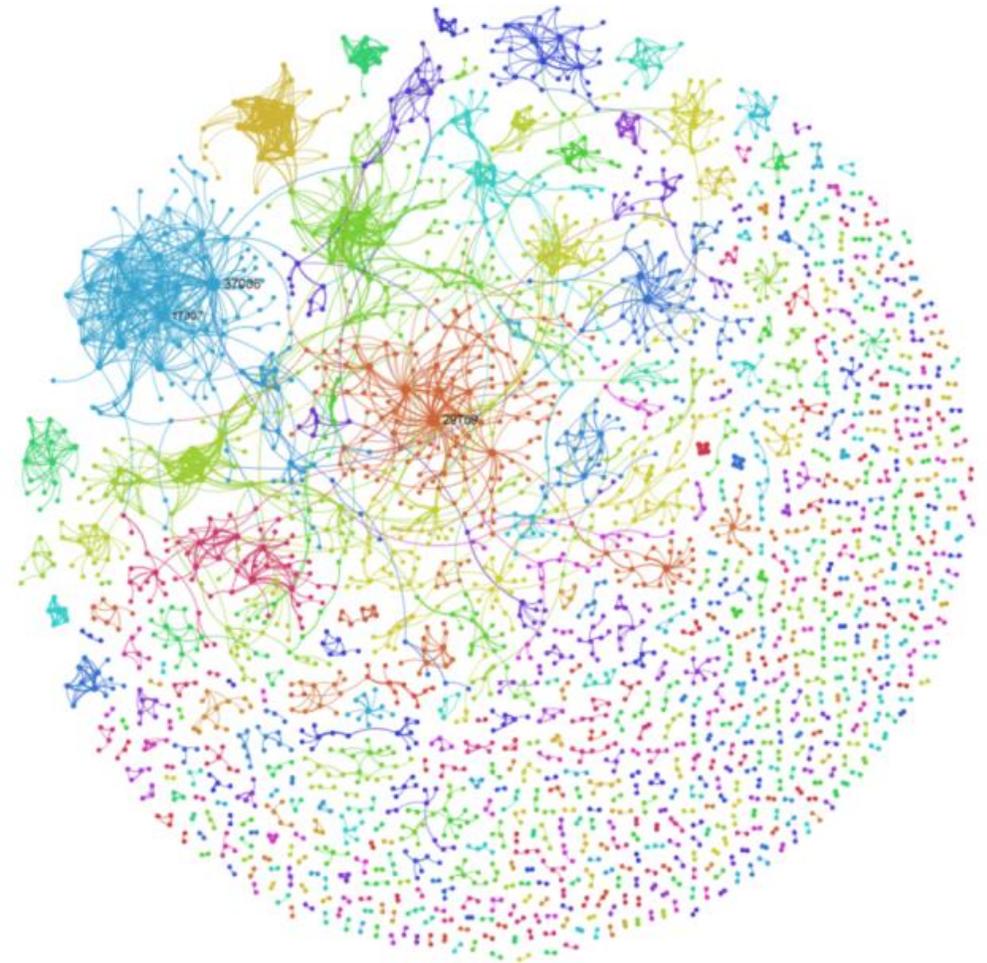
```
SELECT
  *
FROM tf_idf@coprocessor (
  ON tf@coprocessor (
    ON (SELECT docid, term, frequency FROM demo.amazon_tokens) PARTITION BY docid
  ) AS tf PARTITION BY term
  on (select CAST(COUNT(distinct(docid)) AS INT) AS "count" FROM demo.amazon_tokens) as doccount dimension
) AS Tbl;
```

# Run Cosine Similarity between Doc Vectors and Create Sigma Visualization

## 3

Cosine Similarity  
“compare all reviews”

```
SELECT
  target_docid,
  ref_docid,
  1-distance as cosine_similarity
FROM VectorDistance@coprocessor (
  ON demo.amazon_tf_idf AS target partition by docid
  ON demo.amazon_tf_idf as ref dimension
  targetIdColumns('docid')
  targetFeatureColumn('term')
  targetValueColumn('tf_idf')
  measure('Cosine')
  topK(100)
) AS Tbl
```



# Visualize and Drill Down in App Center

## “Covert Affairs”

✔ Covert Affairs is getting better and better and I was disappointed that season 4 is not ready for Amazon Prime! [\[less\]](#)

✔ Good entertainment. I love the episodes. Definitely worth my time to watch Covert Affairs. I like variety and it has plenty of different stories. [\[less\]](#)

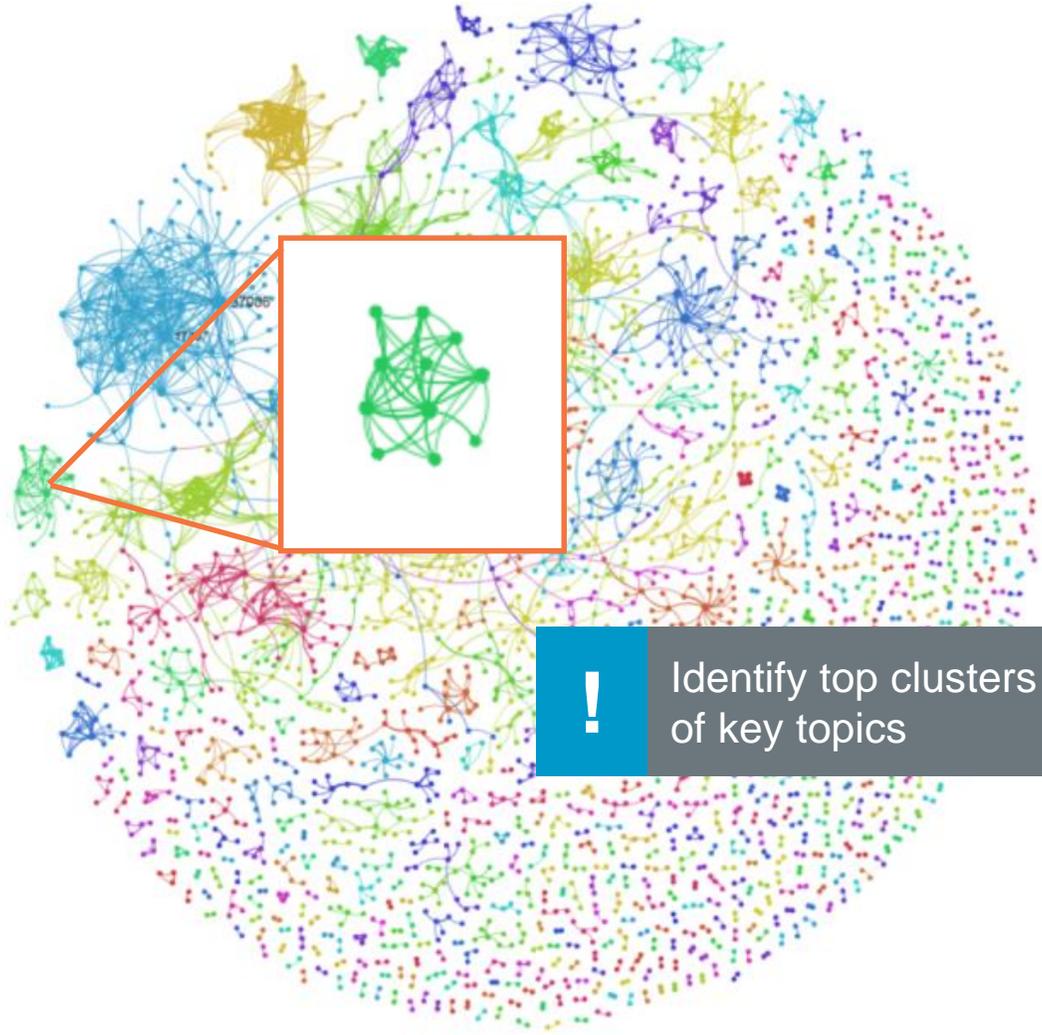
✔ I like Covert Affairs, but it is still building dimensions. I tend to compare it to Alias and I see the importance of the difference with Covert Affairs. The truth is that there is still a better view of the CSI with Covert Affairs but the depth of characters is thin and I am waiting for that breakout year. This is true with almost any series. There is a year that puts it apart for the pack. [\[less\]](#)

✔ I am very pleased with my purchase. This season of Covert Affairs was another great season of the series. I am looking forward to next season of Covert Affairs. [\[less\]](#)

✔ Hi All,Covert Affairs is an excellent series, highly recommend it. So tired of cop shows and CSI, Covert Affairs brings something different to the viewing public. [\[less\]](#)

✔ This is a very exciting season on Covert Affairs and it is well written and certainly holds my interest.Trying to take down the vilian of this show is very interesting and exciting. Bravo to Covert Affairs [\[less\]](#)

✔ Next season of Covert Affairs didn't let us down. There is good interplay between the characters and intrigue and interesting twists in the storyline. We enjoy watching it. [\[less\]](#)



# Visualize and Drill Down in App Center



## “Edge of your seat”

🔗 this show keeps you on the edge of your seat!!! so good!! we can not wait until the next season [\[less\]](#)

🔗 I love the characters, the plot, and the story line. It keeps you hanging by the edge of your seat. [\[less\]](#)

🔗 This is an awesome TV show! Very entertaining, keeps you on the edge of your seat guessing what's going to happen next. [\[less\]](#)

🔗 it is a very intense show that keeps you on the edge of your seat all the time. I can't wait for season 6 to come out. [\[less\]](#)

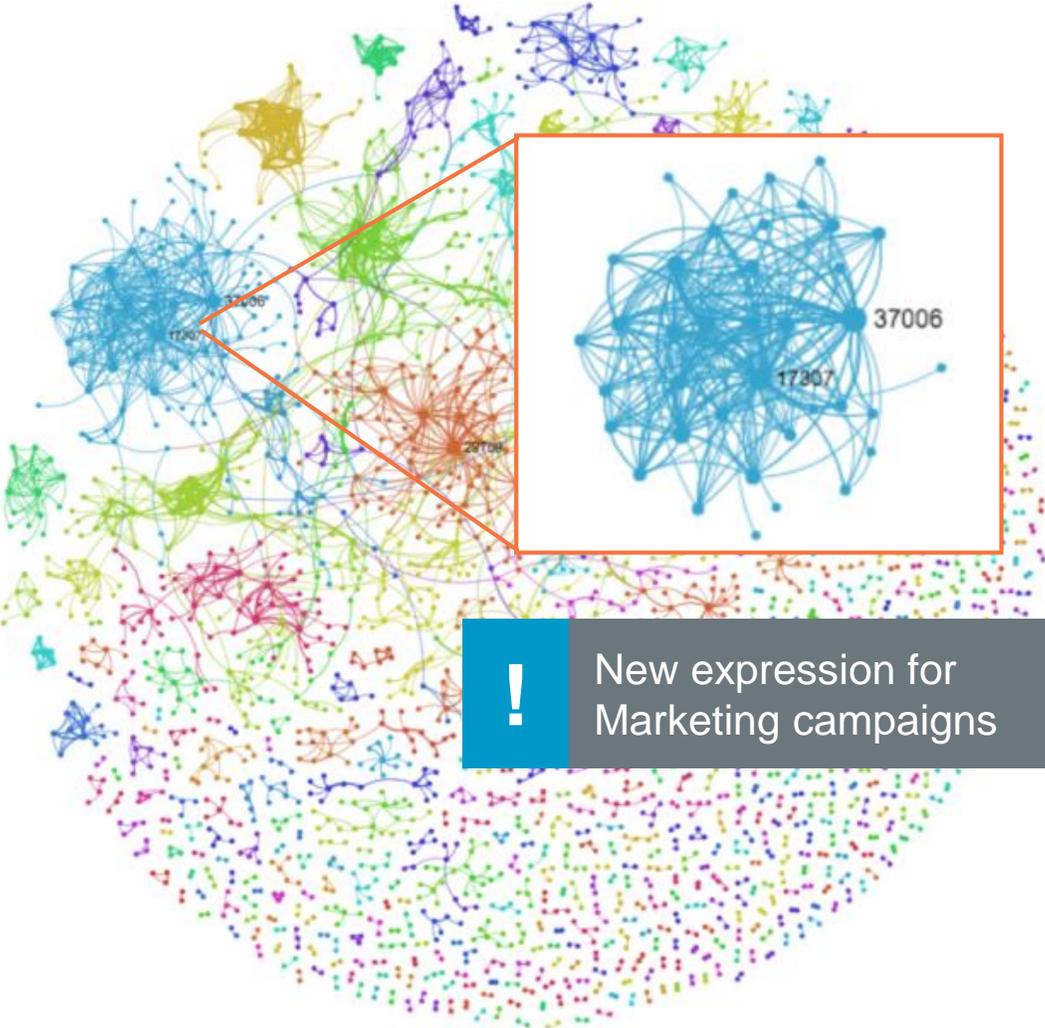
🔗 i was on the edge of my seat

🔗 KEEPS YOU ON THE EDGE OF YOUR SEAT!! Cant wait for the next season! I'm chomping at the bit for it!

🔗 I love the characters and the theme of the show. It keeps you hanging by the edge of your seat. [\[less\]](#)

🔗 The best season ever. Keeps you on the edge of your seat the whole time. So many surprises in each episode.

🔗 My husband absolutely loves this show. The drama is good, the action is great, and the plot keeps you on the edge of your seat. [\[less\]](#)



! New expression for Marketing campaigns

The Teradata logo is displayed in white lowercase letters on a teal circular background. The teal background is a semi-circle on the left side of the slide, with a dark grey background on the right. The logo consists of the word "teradata." with a small orange dot at the end of the period.

teradata.

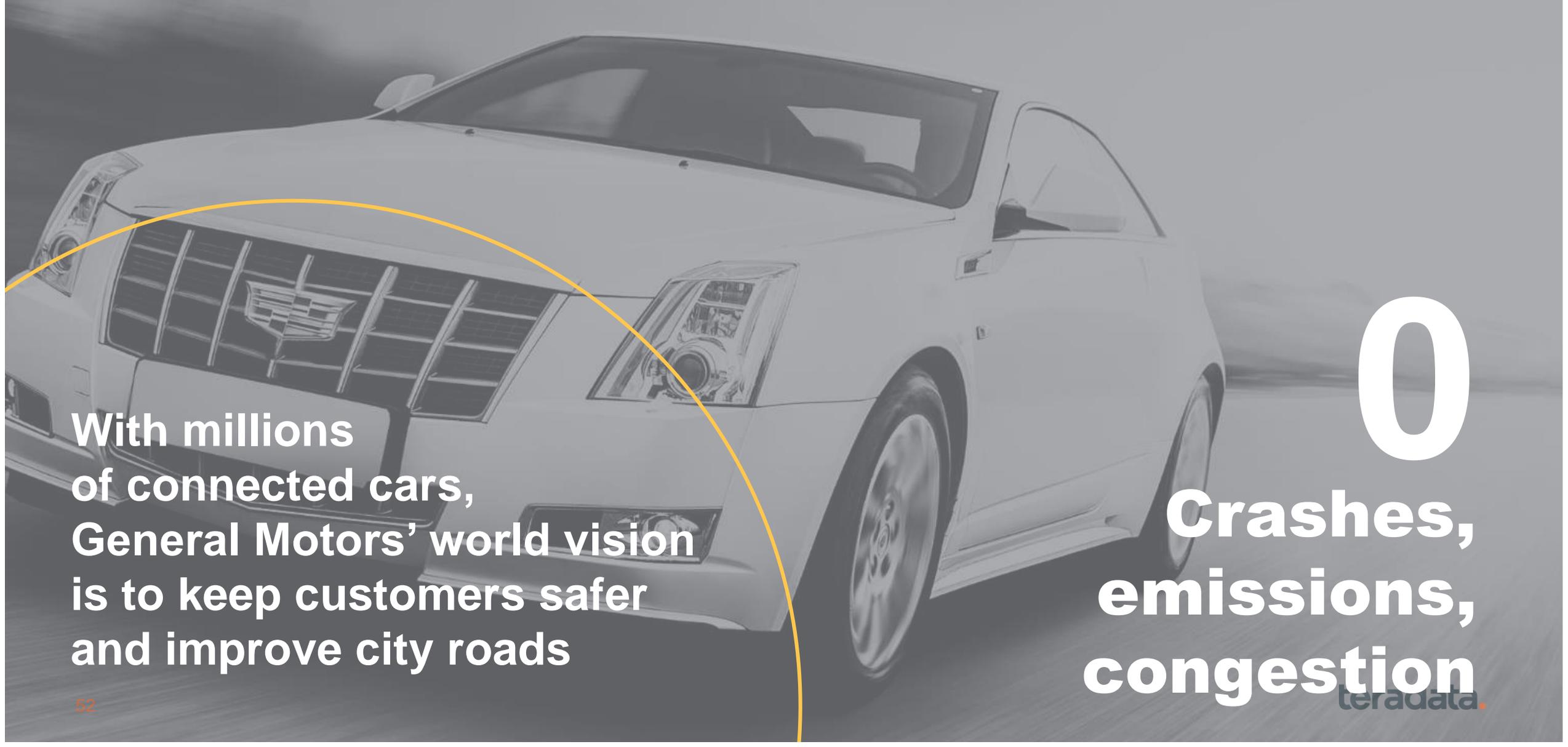
## Two More Customer Successes

Companies have challenges, problems,  
and questions.

Teradata has the answer.



# GENERAL MOTORS' ANSWER:



With millions of connected cars, General Motors' world vision is to keep customers safer and improve city roads

0  
Crashes,  
emissions,  
congestion

# LARRY H. MILLER'S ANSWER:

# 59

## Wins per season

Larry H. Miller  
Sports &  
Entertainment uses  
analytics to keep  
the team playing its  
best and give its  
loyal fans a  
winning season



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# Teradata University Network (TUN) Overview



## Teradata University Network At a Glance

Teradata's **FREE academic outreach program from TERADATA**, supporting:

- over 7,000 registered faculty
- tens of thousands of students
- from over 2,500 universities
- in 124 countries

**Resources support courses in:** analytics, big data, BI/DSS, database technologies, data warehousing, with hands-on software tools

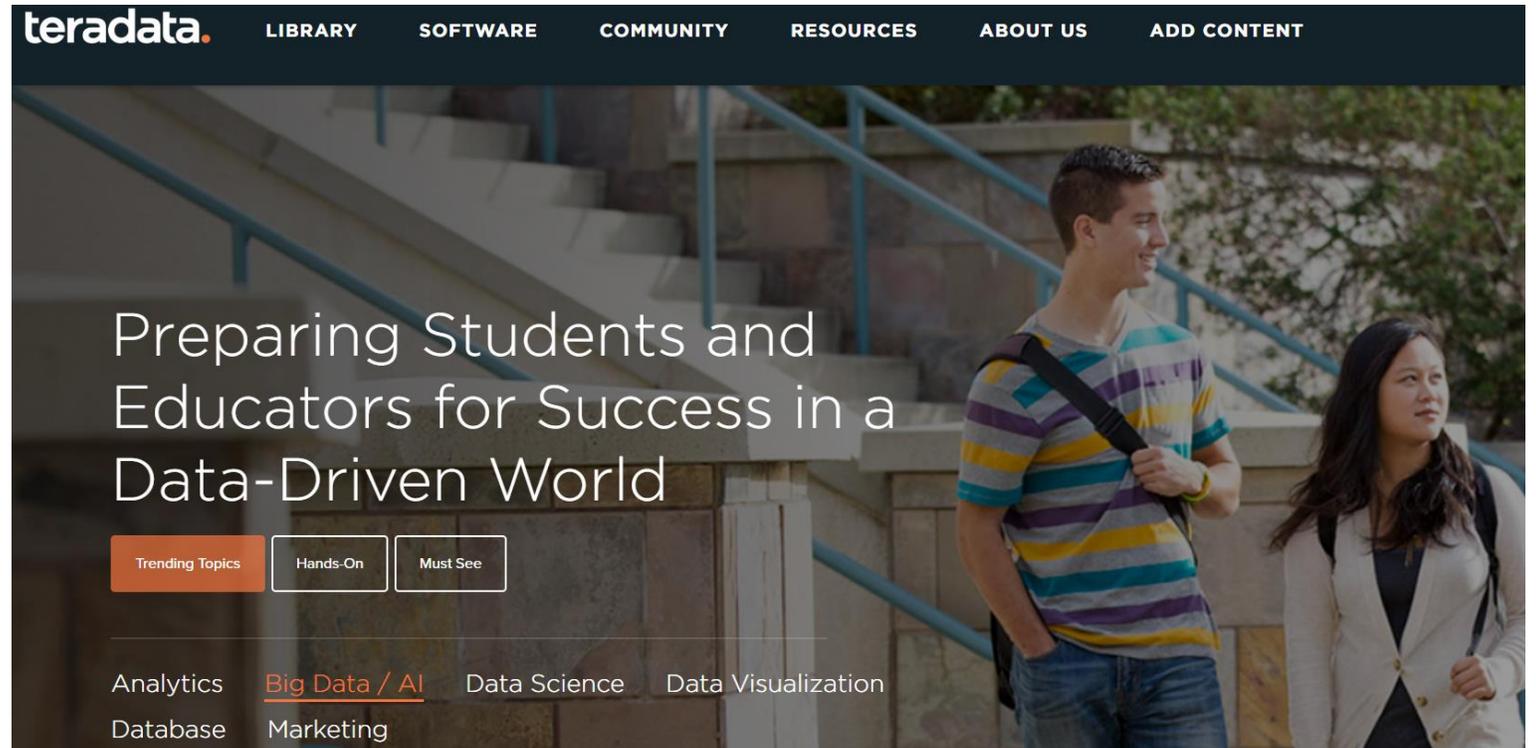
**Programs include:** annual student competitions, career fairs, faculty workshops and contests.

*Established in 2002*

[www.teradatauniversitynetwork.com](http://www.teradatauniversitynetwork.com)

# TUN Website

- *90% TUN Content developed by Faculty (TUN board members)*
- *Simple Navigation*
  - *LIBRARY*
  - *SOFTWARE*
  - *COMMUNITY*
  - *RESOURCES*



# Library – Browsing Resources

- Search by Topic
  - Assignments
  - Case Studies
  - Teaching Notes
  - Videos
  - Others
- Search by Audience

The screenshot displays the 'LIBRARY' section of a website. The top navigation bar includes 'LIBRARY', 'SOFTWARE', 'COMMUNITY', 'RESOURCES', 'ABOUT US', and 'ADD CONTENT'. Below this, a secondary navigation bar features 'Search Library' (highlighted with an orange box), 'BSI: Teradata', 'Sports Analytics', 'Teradata Tech Talks', and 'Marketing Gateway'. The main content area is divided into sections for 'AUDIENCE' and 'ASSET TYPES'. The 'ASSET TYPES' dropdown menu is open, listing various resource categories such as Assignment, Case Study, Dataset, Data Dictionary, FAQ, Interview, Powerpoint Presentation, Project, Quick Start Guide, Readings (e.g., Articles, White Papers, Research Reports), Student Work, Syllabus, Teaching Notes, Tutorial, Webinar/Podcast, and Video. On the left, there is a sidebar with a 'TOPICS' section containing a list of categories like All Topics, Analytics, Big Data / AI, Database, Marketing, Data Science, and Data Visualization. On the right, a preview of a resource titled 'High School Email Templates' is visible, dated Oct 22 2018, with a 'VIEW DETAILS' link.

# Library - BSI – Business Scenario Investigations

**BSI: Teradata** is a fast-paced drama about a team of data and analytic specialists trained to solve business problems by examining data.

The stories are hybrids from customer situations that blend actual applications and future uses of technology that use data to make better, faster decisions.

There are 13 episodes that follow a simple plotline just like the TV show:  
**Business problem – data – insights – action**

Each episode includes video, teaching notes and supporting slides

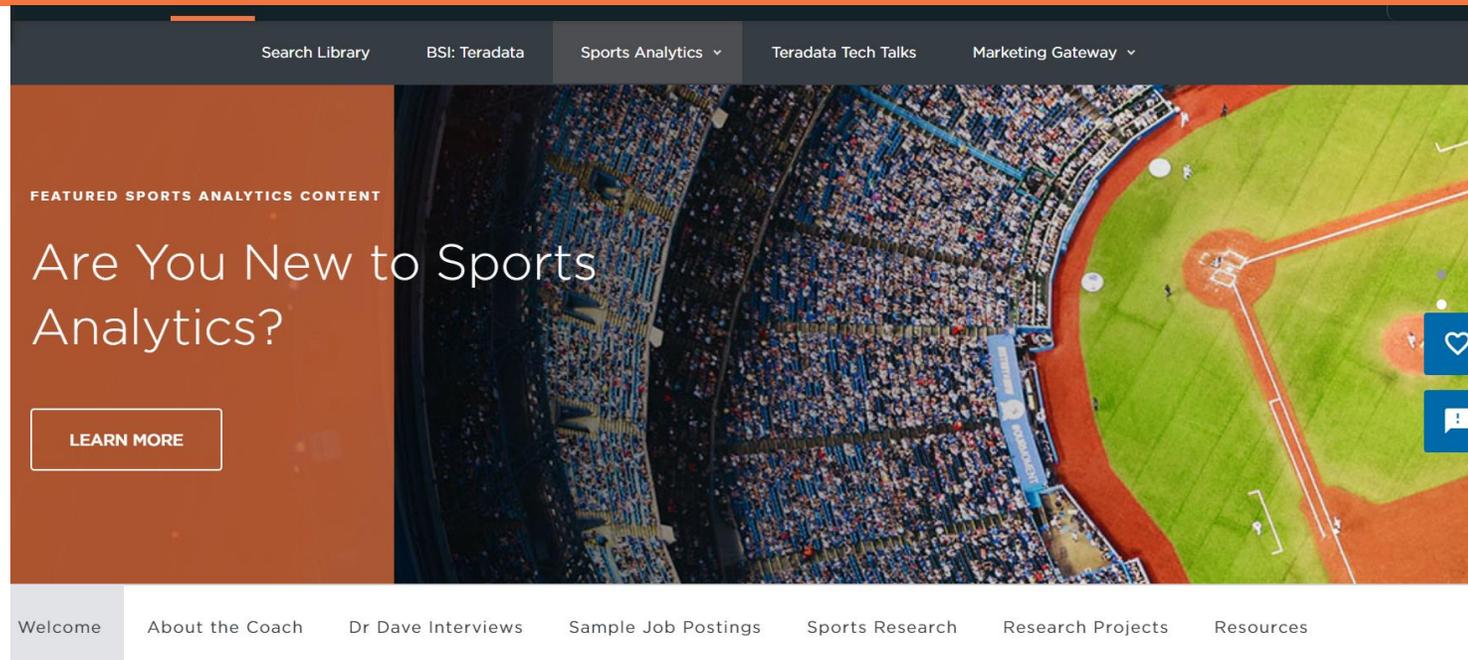


BSI: Teradata is a fast-paced drama about a team of data warehousing and analytic specialists trained to solve business problems by examining data. There are over 10 episodes that follow a simple plotline just like the TV show: Business problem – data – insights – action. The stories are hybrids from current customer situations that blend actual applications and future uses of technology that use data to make better, faster decisions.



Author: Dave Schrader

# Library - Sports Analytics



## Resources for faculty and students

- Modules for classes
- Collaborative Sports Analytics Research by TUN Faculty and Students
- Sports Analytics Data Sets and Research
- Recommended Books, Articles, and Videos
- Moneyball on Campus – Guest Speaker Opportunities

# Software - The Power of TUN Partners

TUN partners provide opportunities to expose students to the most current analytic and big data tools and software with FREE Hands On Access!

## Partners:

*Technology Partners:*



*Association Partnerships:*



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# Student Competitions (Data & Analytics Challenge)

# TUN Student Competitions

<b>Overview</b>	In our 6 <sup>th</sup> year in 2019, TUN's Annual Student Competitions provide students the opportunity to share their skills and talents with professionals from the world's biggest companies and help our annual non-profit partner.
<b>Analytics Challenge</b>	Leverage their own data and any tools for analysis
	Judged on quality of analysis and visualizations
<b>Data Challenge</b>	Works with data and business questions from a non-profit
	Non-profit participates in selection of finalists and judging at conference

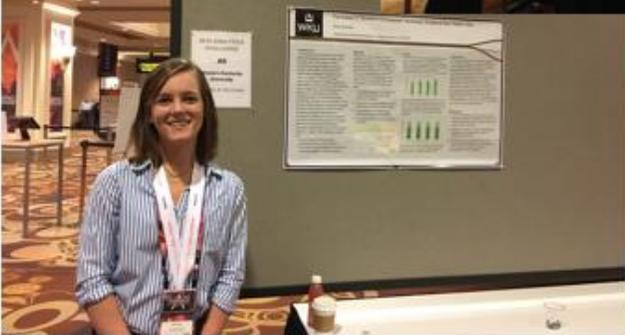
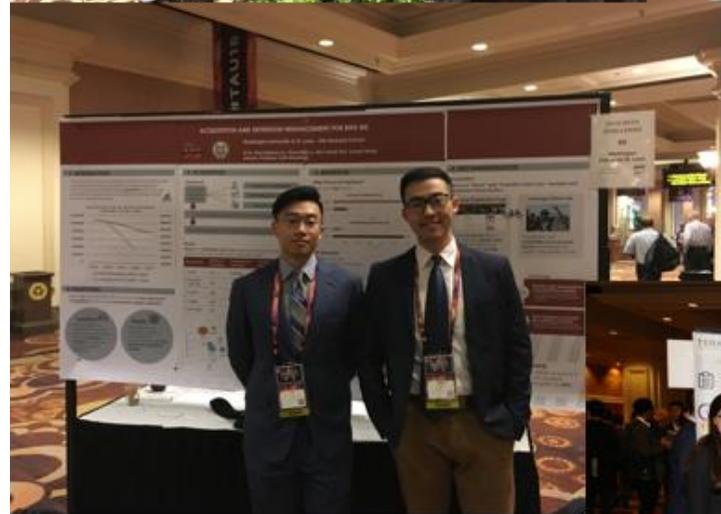
Submissions are encouraged from high school (\*analytics challenge), university undergraduate and graduate (Master's degree candidates) students.

Submissions can be based on work done by an individual or a team (up to 5), but should be submitted by one lead person.

# Academic Welcome Reception



# Student Presentations and Posters



# 2018 Student Celebration Event



# 2018 Analytics Challenge Winners

## Overall Winner:

Loyola University Chicago (Taxi vs. Ride Share)  
David Faust, Katherine Fox, Grace Boos, Natalie  
Dusina, Samantha Schaller



**Best Use of Analytics and Visualization:**  
California State Fullerton (Opioid Epidemic)  
Mansi Bhat



## People's Choice:

Concord Academy High School (Guns in Schools)  
Lucas Ewing & Haley Wixom (pictured)  
August Pokorak, Kenneth Lin, Quinn Meyerson



# 2018 Data Challenge Winners

**Overall Winner:** Washington University St. Louis  
Ariel Tien, Songyi Wang, Di Ai, Xinyi Liu, Ziwei Liu



**Most Value to National MS Society:**  
North Carolina State University  
Jaideep Basak, Ryan Randall, Dena Simkus (pictured)  
Anjanie Kashidas



**People's Choice:** ESCP Europe  
Fahd Lemhaider, Marie Tourdes, Chiao-Ann Tsai, Anke Joubert

**Teradata Technology Award:** UNC Charlotte  
Praveen Sharma (Data Challenge Honorable Mention)



# Wrap Up

REGISTER – All faculty and students can register for free!

[www.TeradataUniversityNetwork.com](http://www.TeradataUniversityNetwork.com)

Student Access Password: **Analytics**

SHARE – Help spread the word to faculty!

ENGAGE - Promote TUN resources, competitions and program with your local university!

Questions? Please email TUN Program Manager:

**[Yenny.yang@Teradata.com](mailto:Yenny.yang@Teradata.com)**

# Key Takeaways

## The Future of Data, Analytics & Machine Learning

1

Teradata's vision for managing the continuous disruption with a **sentient enterprise** and our **Vantage products**

2

How **analytics and data science** can be used to solve real-world problems at-scale in enterprises

3

What **free learning resources** Teradata makes available to students and professors

Thank you.

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