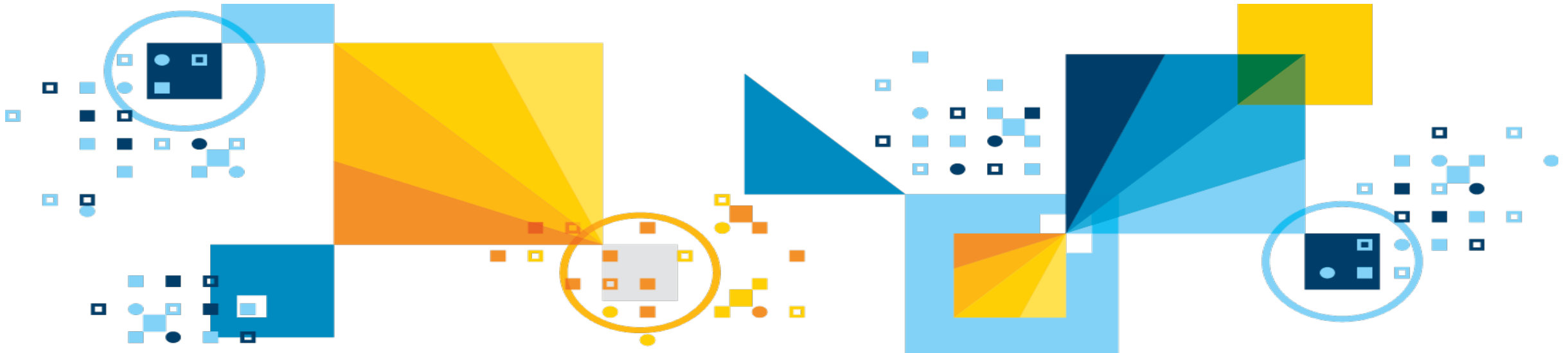
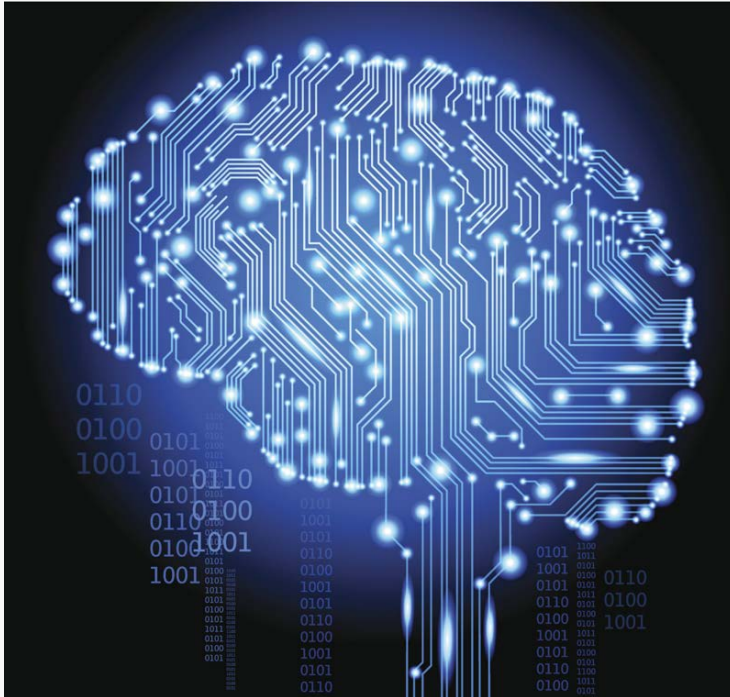


IBM Vision and Strategy for Data Science

Daniele Pietropaoli
Technical Sales and Solutions



Agenda



Watson Data Platform Overview

IBM Data Science Experience

IBM SPSS Platform

IBM Analytics Strategy: 5 Essential Elements



**Data
Science
& Machine
Learning**

*Embrace new
ways to
develop
insights and
streamline
operations*



**Unified
Governance**

*Enable better
insight and
compliance
across all data*



**Hybrid Data
Management**

*Unify the
approach to data
and content on
the path to cloud*



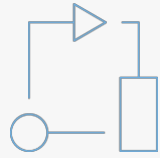
**Data Analytics
& Visualization**

*Empower all to
make data-driven
decisions quickly
and easily*



Open Source: Hadoop, Spark & more
Commit to openness—for speed and innovation

Watson Data Platform: Connects Users to Data and Analytics



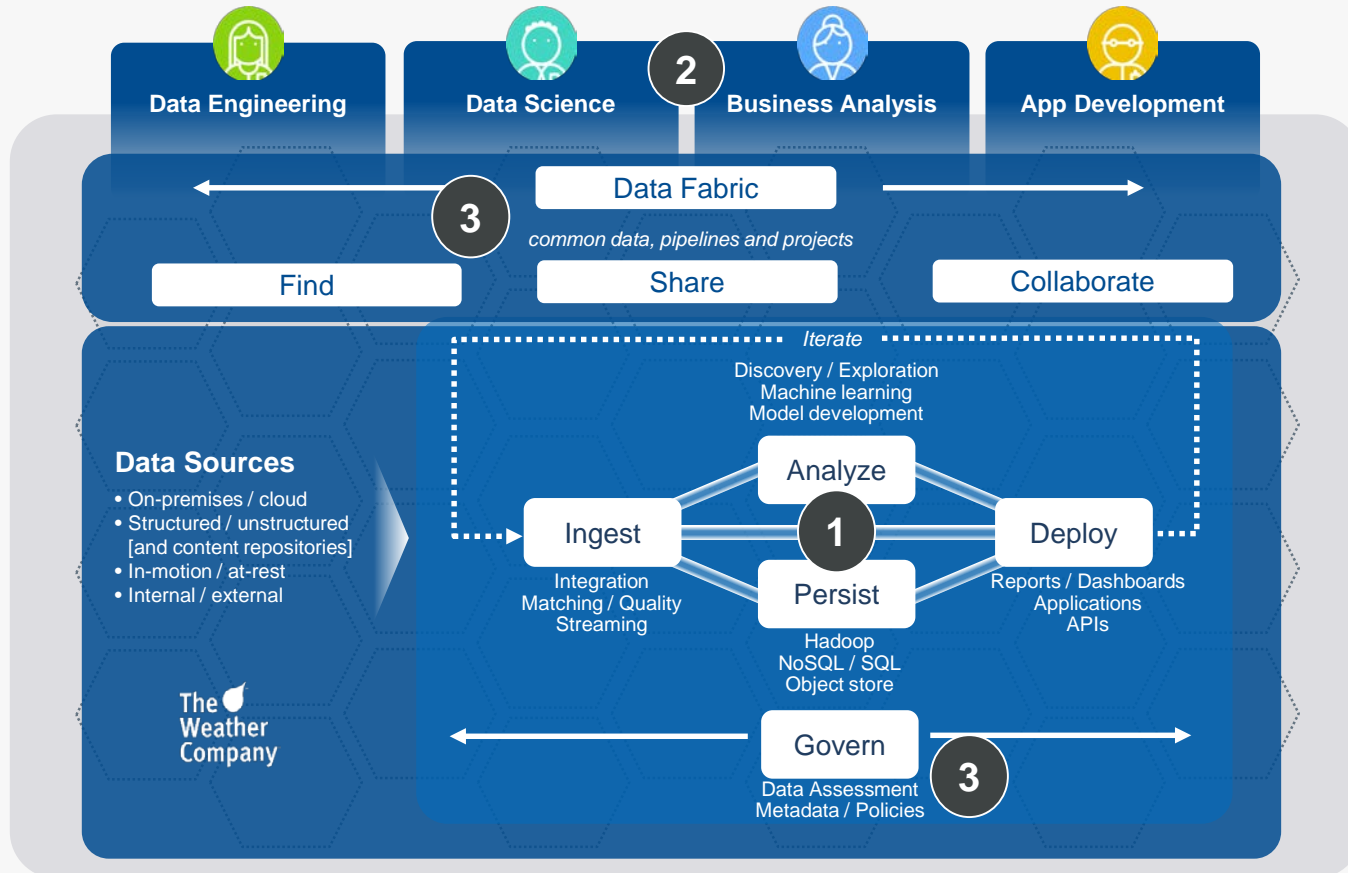
Platform.



Ecosystem.

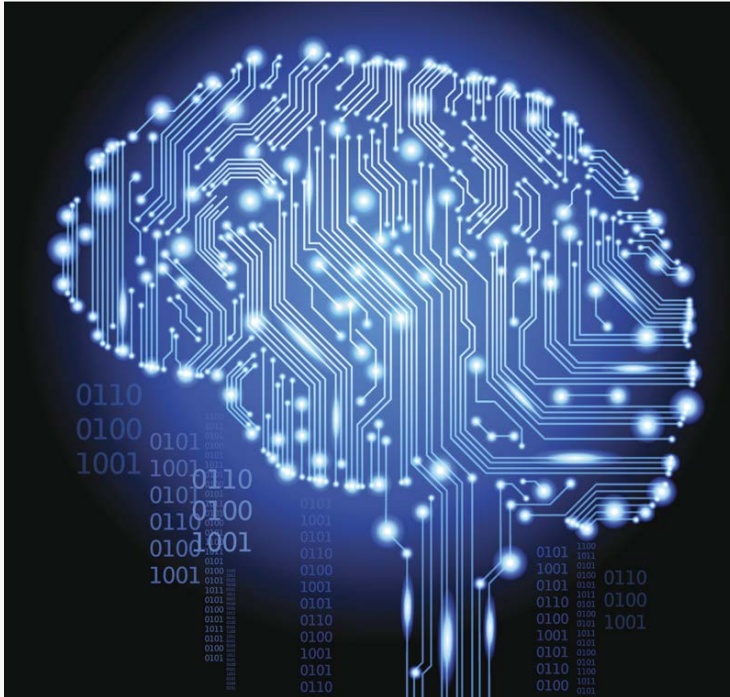


Method.



- 1** Composable data & analytics cloud services
- 2** Tailored user experiences for data professionals
- 3** Foundational elements that provide a common catalog, projects, and community capabilities across the platform

Agenda



Watson Data Platform Overview

IBM Data Science Experience

IBM SPSS Platform

2017 Gartner Magic Quadrant for Data Science Platforms



Gartner.

Figure 1. Magic Quadrant for Data Science Platforms

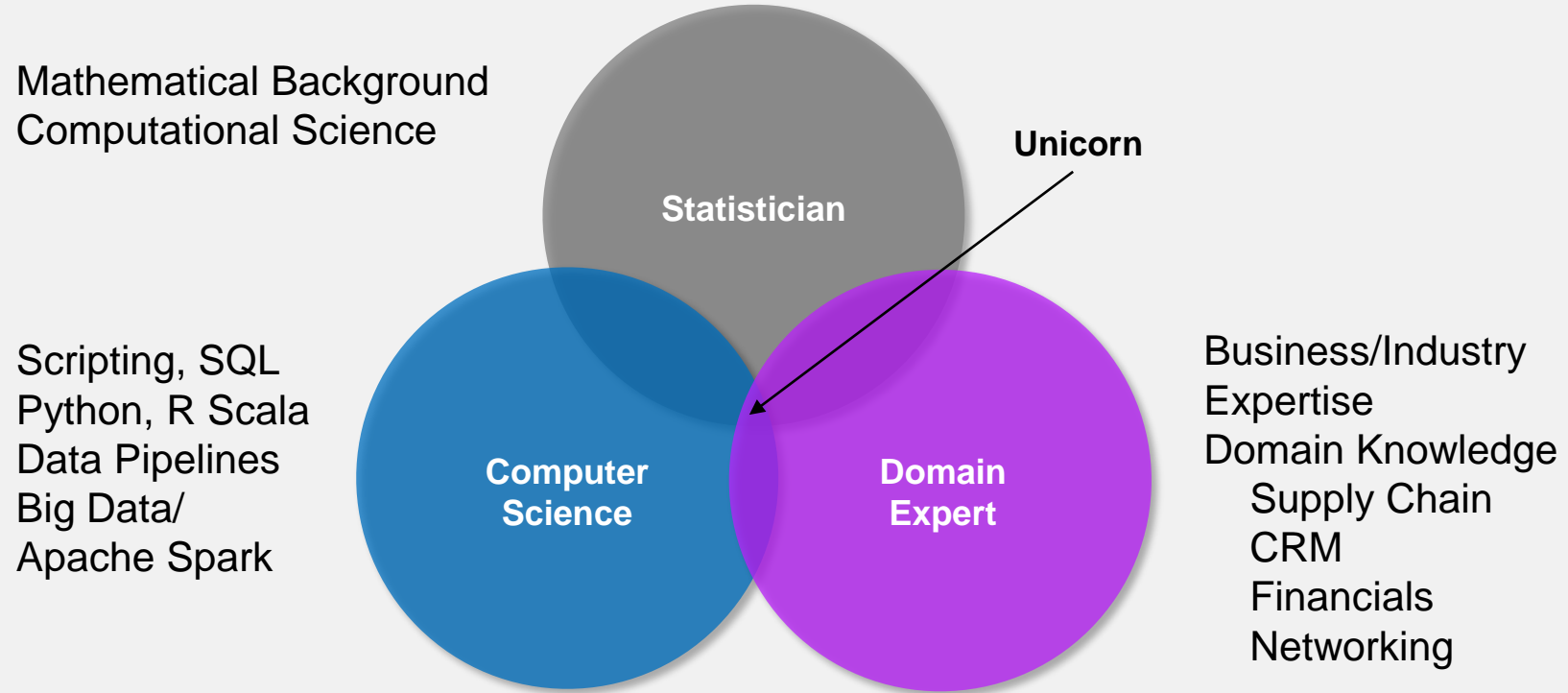


Source: Gartner Magic Quadrant for Data Science Platforms, Alexander Linden, Peter Krensky, Jim Hare, Carlie J. Idoine, Svetlana Siclar, Shubhangi Vashisth, 14 February 2017.

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Data Science Professional

Data Scientists combine skills across areas of Expertise



A Data Science Professional vary in a combinations of these skills

IBM Data Science Experience - *Guiding Principles*

Vision

Environment that brings together everything that a data scientist needs today. It includes the most popular Open Source tools and IBM unique value-add functionalities with community and social.

Mission

Help data scientist be more successful

Themes

Community

- Find tutorials and datasets
- Connect with other data scientist
- Ask questions
- Read articles and papers
- Fork and share projects

Open Source

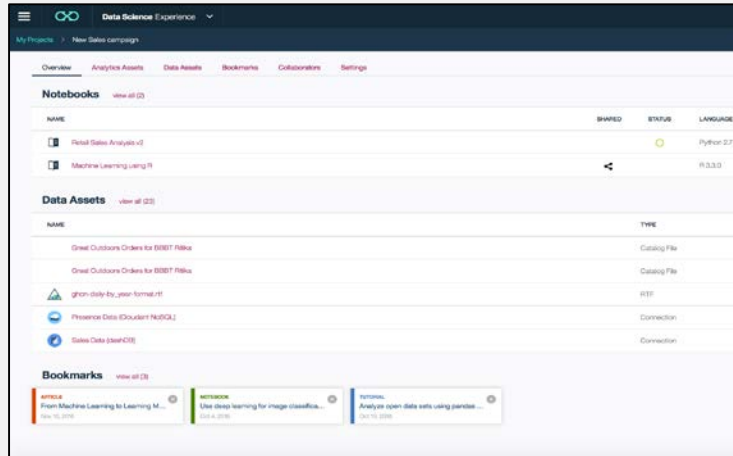
- Code in Scala/Python/R/SQL
- Jupyter Notebooks
- RStudio IDE and Shiny apps
- Apache Spark
- Your favorite libraries

IBM Value Add

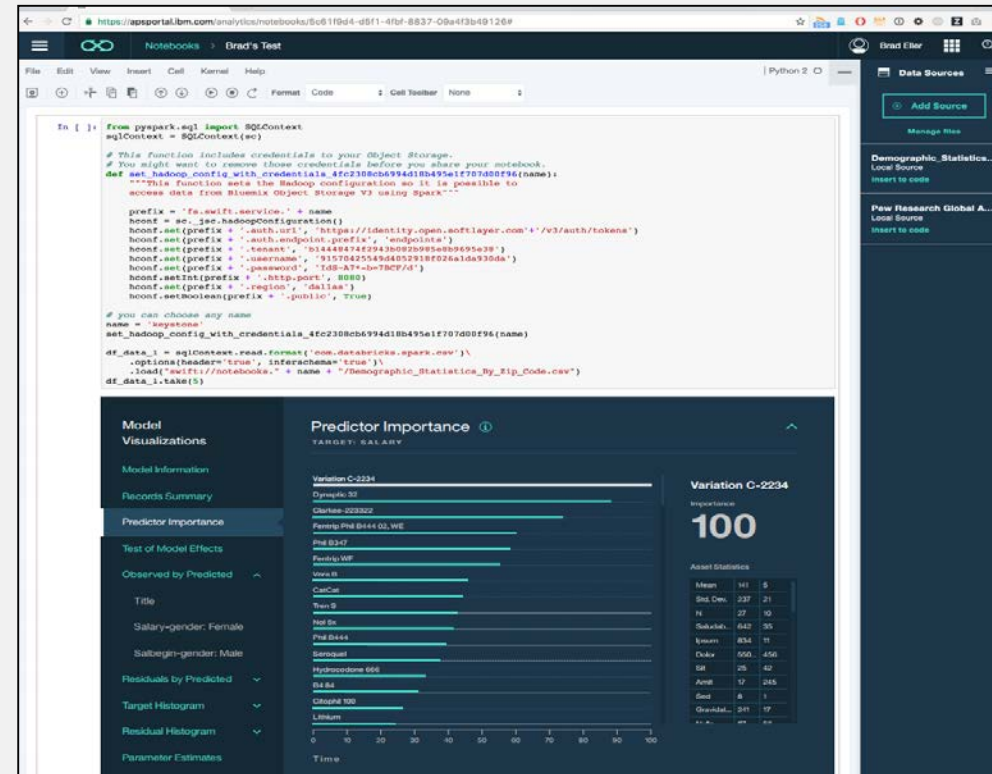
- Data Shaping/Pipeline UI
- Auto-data preparation
- Auto-modeling
- Advanced Visualizations
- Model management and deployment
- Well documented Model APIs

IBM Data Science Brings Together Visual and Programmatic Worlds

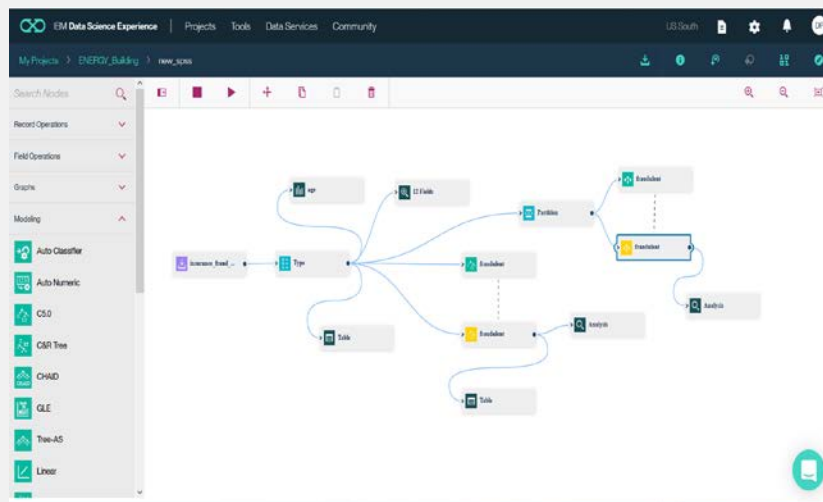
Collaborate Using Projects



Code Algorithms in Python, R and Scala: Automatic Model Visualization



Model Canvas

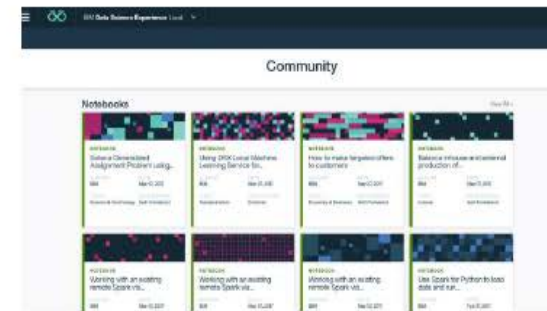


Architecture

Data Science Experience (DSX)

- IBM Data Science Experience (DSX) is a platform for developing and deploying analytical applications for [data science purposes](#)
 - Supports development, deployment, and model management
 - Notebooks, collaboration tools, [integrated development environments for Python and R](#)
- DSX is available
 - As a cloud offering
 - As an **on-premises solution on POWER 8 architecture**

Cluster of Power Servers – GPU / Non-GPU



Deep Learning

Bringing the Power of Deep Learning to More Data Scientists

Today we're unveiling that we are bringing two key software tools: DSX and PowerAI for data scientists together. We are integrating PowerAI Deep Learning enterprise software distribution into the Data Science Experience.

IBM Machine Learning (ML) for z/OS



Soluzione On Premise su piattaforma z/OS

Stessa tecnologia di IBM Machine Learning (ML) Service

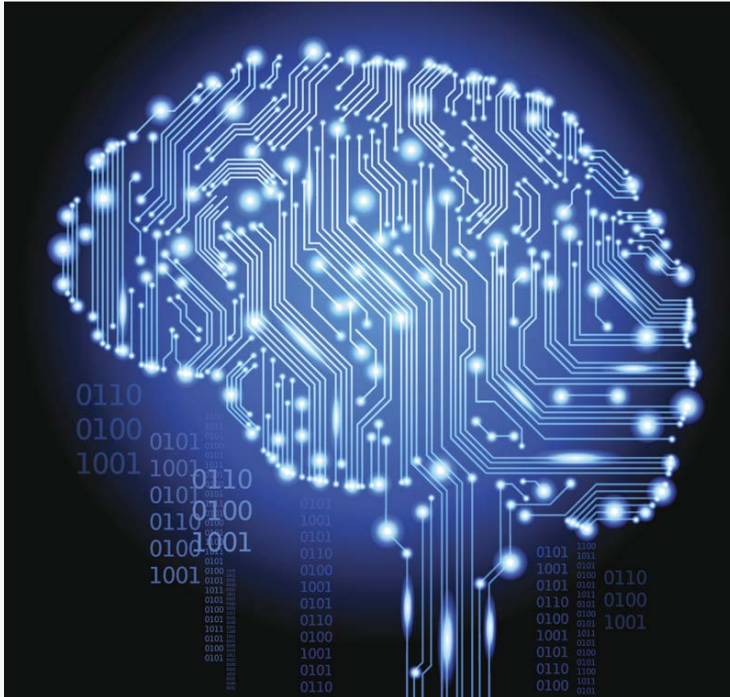
Approccio complessivo : preparazione dati, training e valutazione, sviluppo del modello, scoring, monitoring e retraining **o modulare** (scoring associato alla transazione)

Si può avvalere della soluzione **IBM DB2 Analytics Accelerator** e utilizza **Apache Spark** su z/OS

Vantaggi

- ✓ **Sicurezza** e migliore **governance** dei dati z/OS
- ✓ **Federazione dei dati** strutturati e non strutturati, da sorgenti z e ambienti distribuiti
- ✓ **Feedback continui e modelli più accurati**, grazie all'analisi dei dati transazionali 'live', il ritardo tra la creazione ed il consumo dei dati è **minimale**.

Agenda



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IBM SPSS Platform

IBM SPSS Platform:

Pure Data



Netezza

Hadoop

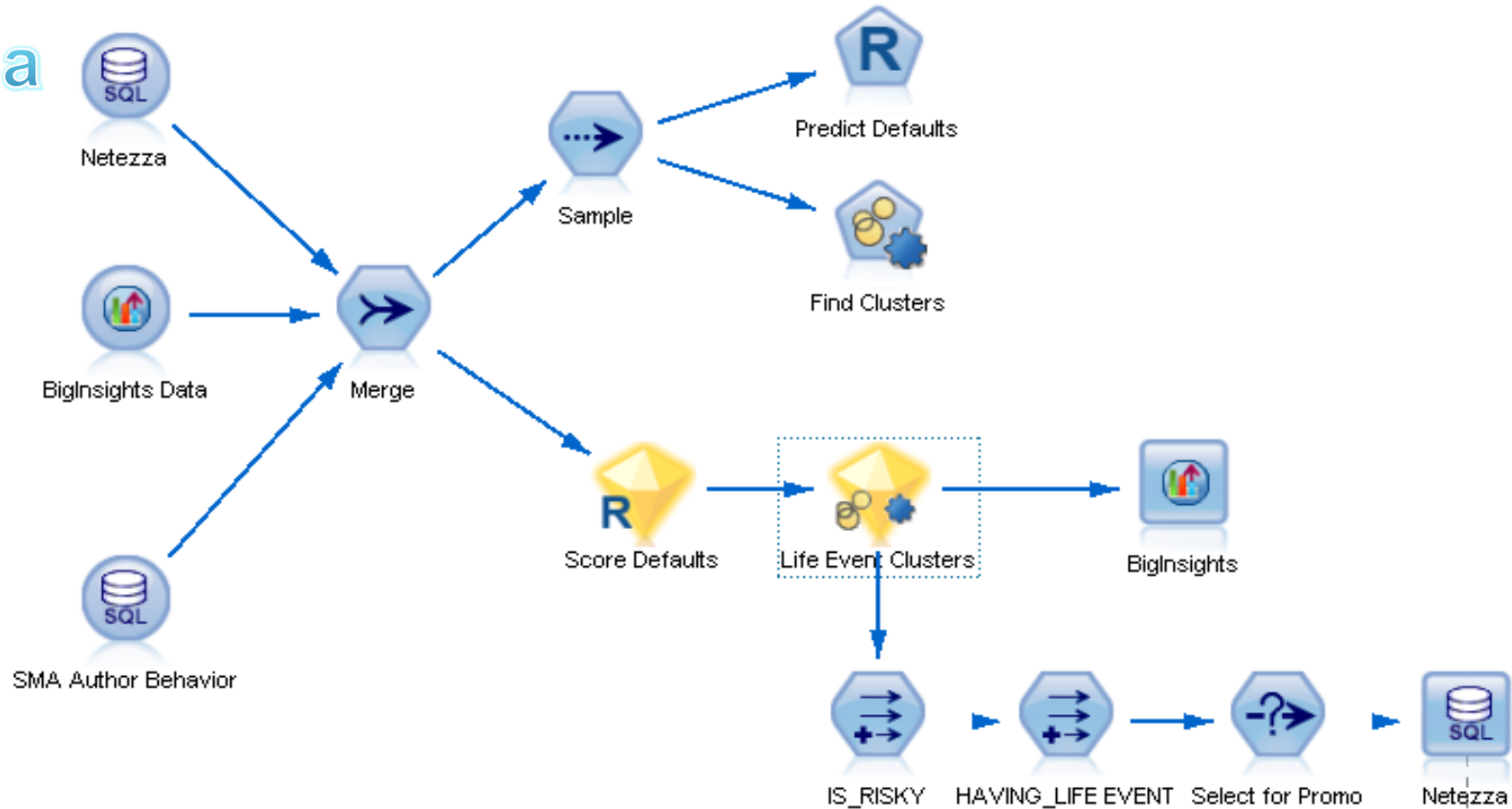


BigInsights Data

RDBMS











SMA Author Behavior



Data mining and text analytics workbench to build predictive models without programming or coding

Analytics Use Cases

Human capital management			<ul style="list-style-type: none">• Acquiring, growing and retaining employees• Helping ensure optimal staff levels• Increasing performance, efficiency and engagement
Crime prediction and prevention			<ul style="list-style-type: none">• Identifying predictors of threat and fraud• Optimizing force deployment• Anticipating and visualizing crime hot spots
Supply chain management			<ul style="list-style-type: none">• Increasing visibility into virtually all areas of the supply chain• Decreasing downtime and unpredictability• Improving customer satisfaction
Process optimization			<ul style="list-style-type: none">• Improving accurate responses at the point of impact• Decreasing costs through operational efficiency• Transforming threat and fraud identification processes

Energy and Utilities

Energy Forecasting

- Forecasting the energy production on Wind Energy. Every day, executes models to knowing the amount of energy that it needs to produce for the customer consumption, for factories and houses requirement.
- They're applying, more times a day, different Forecasting models analysing more that 1000 variables with all components about characteristics of meteo forecasting (rain, sun, snow) , wind farm and houses requirements.

Finance Banking

Credit Risk

- Analyse Credit Risk, with KPI and Mining models, to estimate credit default for prospects, new customers and old ones.
- Advanced Analytics real time, to have a mortgage response on demand.

Predictive Maintenance

Failure

- All-electric vehicles (EVs) do not use gasoline like traditional or hybrid cars, they rely entirely on their batteries for power. They wanted to better understand what factors had the greatest impact on battery performance and longevity.
- Automotive Factory can now gather and analyze near-real-time battery data on the road. Analysis can identify which operating factors, such as road conditions, charging patterns and trip length, have the greatest impact on battery life. Further analysis can help the automaker predict when batteries need replacing, so it can alert owners in advance.

Fraud Behaviour

Fiscal Irregularities

- Profiling Analysis and calculation of "irregularities score" on Italian companies in order to describe the fiscal behaviour of construction companies, medium and small size.
- Evaluation of irregularities of these companies in terms of "corporate security employee", "pay contributions", "undeclared work", and etc...
- The inspection visit has been directed towards companies with an high score, about irregular work than the other, leading to a personal inspections savings and less controls versus other legal companies.

Get started TODAY

- IBM Data Science Experience [web site](#)
- IBM SPSS Software [web site](#)
- IBM Cloud [web site](#)

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