Analisi dei dati: IBM Watson e la nuova era del Cognitive Computing

IBM workshop, 29/10/15 ore 15.15





Benvenuti!





Introduzione:
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Director of IBM Digital Sales, Italy
@fabiolatisbini



Relatore:
Pietro Leo,
Executive Architect - IBM Italy CTO for Big Data Analytics & Watson
@pieroleo

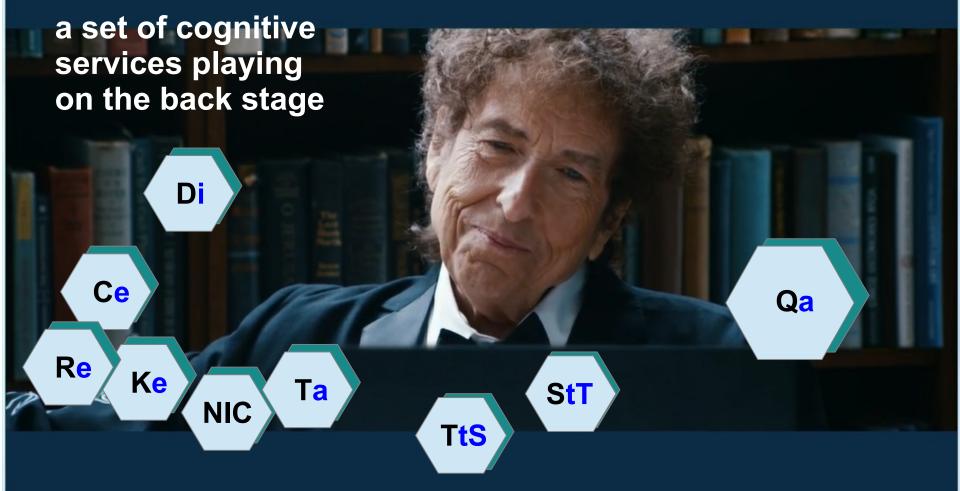






Source: https://www.youtube.com/watch?v=pwh1INne97Q





Data Analysis methods are evolving, type of data are evolving, size is increasing.... we need to outThink!







Predictive

What will be our campaign return for Q4? What combination of products will sell best? What are customer segmentation attributes associations according to past campagn results?

Prescriptive

In order to foster a certain product to sell, we need to promote through 15% discounts on this customer segment with this channel, to obtain the highest profit based on costs, budgets, constraints and benefits associated with the campaign

Cognitive

What is driving our revenue? Answer: X & Y are driving revenue and here are three identified areas to help future growth. What concepts are associated with this customer claim or opinion? \square What words/offers will

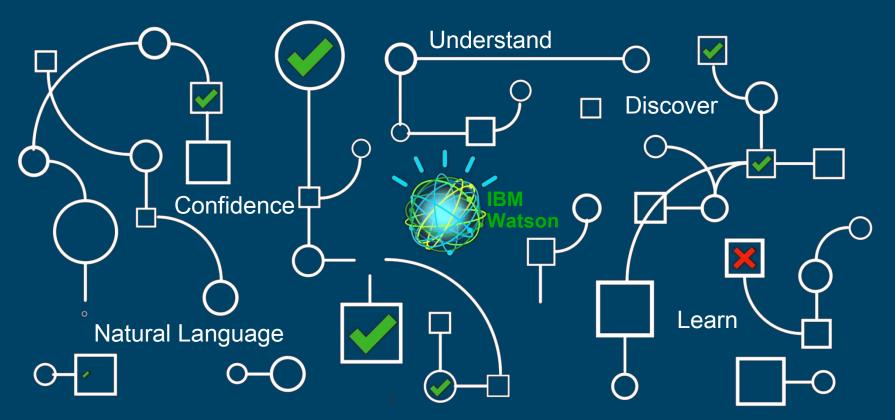
Descriptive

What is our customer segmentation by country/territory? What products are selling best?

engage her?



How does a Cognitive System work?



Source: www.ibm.biz/cognitivera

IBM

Today Watson is in the 17 industries across 6 continents



"We train Watson. It learns like we learn...We're one of the very first companies to launch a new company built entirely on top of Watson."

Terry Jones, Chairman, *Wayblazer*, Founder, *Travelocity.com*, and Founding Chairman, *Kayak.com*



"Watson can give [our members] crisp yet nuanced answers to their questions. For instance, 'My husband just got out of the Army and we are having a hard time finding a job for him.'"

- Eric Engquist

Associate Vice President,



"Pick1 is a marketing research and data platform that uses the cognitive computing power of Watson on Bluemix"

Paolo Privitera
 CEO of Pick1 US-Italy



M Watson will go through the data the same way we are now in two weeks and in two seconds."

Robert B Darnell, M.D. Ph.D.,

President, CEO and Scientific Director

New York Genome Center



"Watson will help deliver consistent quality from adviser to adviser."

Joyce Phillips

CEO Wealth Management,

ANZ Bank



"Watson will revolutionise and simplify student problem-solving: the more questions it is asked, the more informative its answers will become."

Jane den Hollander

Vice Chancellor,

Deakin University
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14



Cognitive business and its Analytics foundation in IBM

Watson Ecosystem:

70.000 developers, 350+ partner companies, 100 cognitive applications 6.000 IBM researchers & specialists working in the IBM cognitive divisions

Offerings:



Watson Engagement Advisor Watson Discovery Advisor Watson Policy Advisor Watson Decision Advisor

Products:

Watson Explorer Watson Analytics Watson Curator



Applications:





Watson for Wealth Management Watson for Oncology Chef Watson

Platform:



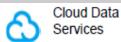
Watson Services on BlueMix Watson Developer Cloud Watson Tooling Watson Health

IBM Analytics

15k consultants and 30k projects, 500+ patents generated each year Full range of analytics and data capabilities using open source innovation for real-time actionable insights











Insight as a Service



Analytics Consulting Services



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Analytics Platform







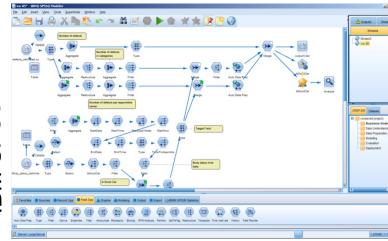
Insight as a Service



Analytics Consulting Services

Hundred of high performance Statistics and Data Mining algorithms and techniques is the foundation of Cognitive Computing!

SPSS Modeler



Source: http://ibm.biz/predictive-analytics-study

Source: IBM Analytics: http://www.ibm.com/analytics/us/en/

1 - Modeling Algorithms

Anomaly Detection Apriori. **Bayesian Networks** Decision Trees (C&RT, C5.0, CHAID and QUEST) **Association Rules** Cox regression Decision List. Build interactive rules.

Factor/PCA, Feature Selection. Reduce data. Spatial Association Rule

Clustering/Segmentation: K-Means, Kohonen, Two Step, Discriminant, Support Vector Machine (SVM), KNN Logistic Regression

Neural Networks

Regression, Linear, GenLin (GLM), Generalized Linear Mixed Models (GLMM) Model linear equations. Self-learning response model (SLRM)

> Sequence Analysis **Spatial-Temporal Prediction** Support Vector Machine

2 – Geospatial Analysis Space-time-boxes

3 - Social network analysis

Group analysis, social similarity, Diffusion Analysis

4 - Entity analytics

Identity resolution of individuals, organizations, etc

5 - Text Analytics

Key concepts, themes, sentiments and trends)

IBM

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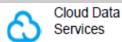
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Analytics Platform





Internet of Things



Insight as a Service



Analytics Consulting Services

Source: http://www.ibm.com/analytics/us/en/

Source: www.ibm.biz/cognitivera



IBM Watson is the platform for Cognitive Business.

About 30 cloud-based APIs to build cognition into applications, processes and products

Source:

http://www.ibm.com/smarterplanet/us/en/ibmwatson/developercloud/



Language enhanced.

GA - Language Detection

GA - Keyword Extraction

GA - Entity Extraxction

GA - Author Extraction

GA - Sentiment Analysis

GA - Text Extraction

GA - Feed Detection

GA - Concept Tagging

GA – Taxonomy

GA - Personality Insights

GA - Natural Language Classifier

GA - Retrieve & Rank

GA - Concept Insights

GA - Language Translation

GA – Dialog

B - Question & Answer

B - Relationship Extraction

B - Concept Expansion

E - Tone Analyzer

E - Document Conversion



Vision made clear.

GA - Face Detection/Tagging

B - Visual Recognition

E - Visual Insights



Speech clarified.

GA - Speech to Text GA - Text to Speech



Data Insights at your fingertips.

GA - Tradeoff Analytics GA - Watson News

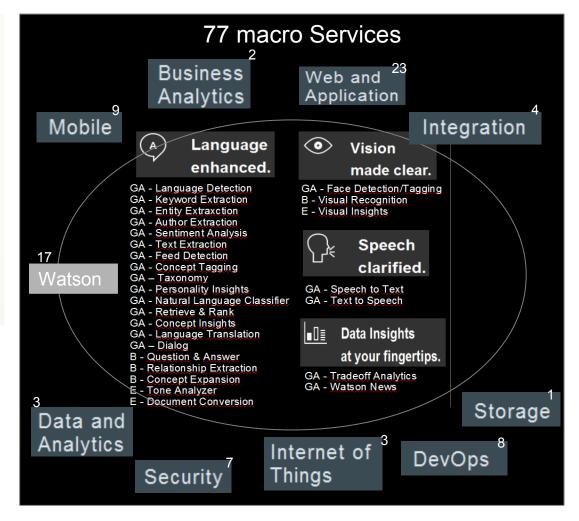


IBM Watson is the platform for Cognitive Business.

Watson APIs are integrated with tens of other APIs on IBM cloud on many other domains



www.ibm.biz/ASSIRM15

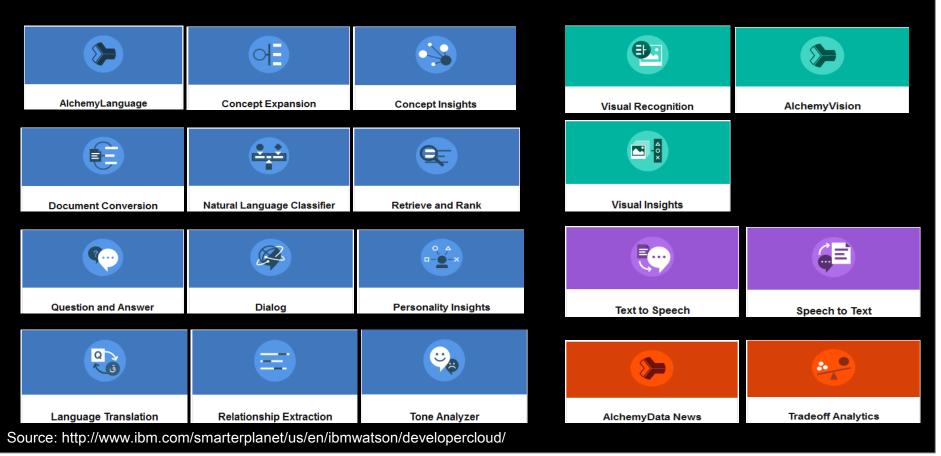


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Watson Services





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Analytics Consulting Services



Watson Analytics



What is the treatdown of Win

Analytics made easy

Predictive analytics and data visualization built for you.

Analyze your data in minutes on your own without downloading

software.



To answer business questions



To take confident action on insights



Fifter by County

AWKER

Hidrory.

COCHRECT

To tell a compelling story



To analyze trusted data















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