

ARE YOU READY FOR THE

COGNITIVE COMPUTING REVOLUTION?

THE AMOUNT OF
TOTAL GLOBAL DATA
DOUBLES
EVERY 2 YEARS

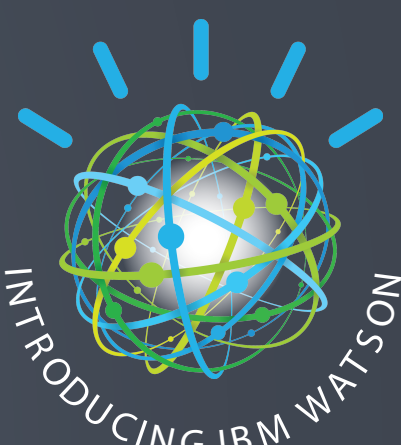


IT'S HERE

Data streams from our devices, social networks & connected systems we use.

80% of this data is virtually invisible to computers

until now



THEN 1960's
PROGRAMMATIC COMPUTING

Reliance on structured data to compute results

Lack of ability to interpret queries past keyword matches like traditional search engines

COGNITIVE BUSINESS IS HERE

NOW
COGNITIVE COMPUTING

Iterative, exploratory analysis of structured and unstructured data

Evaluates quality and relevance of information

Mirrors human decision-making and learning processes

This clears the way for a new generation of business that will rely not just on programmable computing, but on cognitive technologies like Watson.

Say Hello to Watson!

IBM Watson applies its cognitive technologies to help change how we approach and understand all of this information. Everything that is digital has the potential to become cognitive, and, in a sense, be able to “think.”

HERE'S HOW IT WORKS:

1 Database preparation

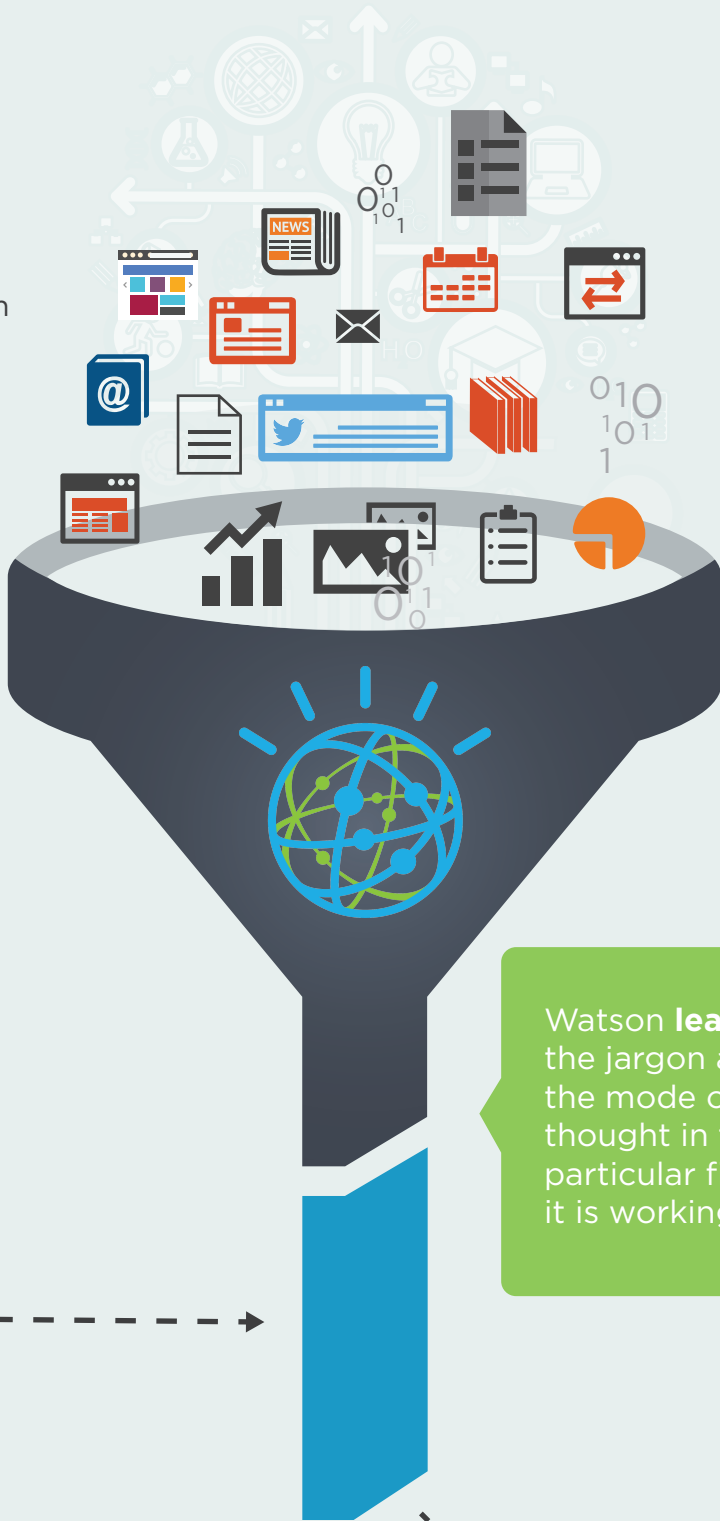
Watson is supplied with large amounts of unstructured to semistructured data ranging from publicly available databases through to user selected databanks based on the field it is working in.

2 Question Analysis & Content Specific Information

The user supplies Watson with the query in form of a question. Also, Watson can be supplied with additional data for the particular issue at hand, for example, a doctor can supply their patient's medical history to personalise the results to the needs to the patient.

3 Suggested Recommendations

Finally, Watson spits out a number of suggestions or recommendations giving the statistical significance of each one and showing the mode of thought each suggestion used.



Watson learns the jargon and the mode of thought in the particular field it is working in.

Watson's journey to Jeopardy!



In 1997 IBM made history with **Deep Blue** - the first computer to beat a world champion at chess. In 2004, IBM set its eyes on **Jeopardy!**

Unlike **chess**, which has set rules, Jeopardy! involves the **complexities of human language**, such as puns, metaphors and innuendos.



In 2005, the development of IBM Watson **begins**.

In 2006, while the best real-life competitors buzzed in half the time and responded correctly to as many as **95%** of clues, Watson's first pass could get only about **15%** correct.



In 2008, IBM representatives **contact** producers of Jeopardy! organising a game vs the program's most successful contestants; **Ken Jennings** and **Brad Rutter**.

By 2010, Watson could beat human Jeopardy! contestants on a regular basis, winning **65%** out of about **100** matches.



In 2011 **The first match takes place**. The game ended with Jennings with \$4,800, Rutter with \$10,400, and Watson with **\$35,734**.

2011 sees the second match taking place. The final result ended with a **victory for Watson** with a score of **\$77,147**, besting Jennings who scored \$24,000 and Rutter who scored \$21,600.



IBM makes history once again as it creates a machine that beats humans at Jeopardy!



How can Watson help you?



Personalise your offering

Watson is able to paint a richer picture of a customer, adding details that have been hard or impossible to detect: tone, sentiment, emotional state.



Gain insights and predictions

It can uncover patterns, opportunities and actionable hypotheses that are virtually impossible to discover with existing technology.



Optimise your operations

A cognitive business can help transform how it functions, infusing its business processes with cognitive capabilities that can potentially lead to better forecasting and decision-making.

JUST ASK WATSON

Interested in learning more about how IBM Watson and cognitive business can rapidly help transform your processes? Register for our **Just ask Watson** event series.

REGISTER HERE



Sources:
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Cognitive Computing in the Age of Big Data
IBM: Cognitive Outthink

Baker, Stephen (2011). Final Jeopardy: Man vs. Machine and the Quest to Know Everything. Boston, New York: Houghton Mifflin Harcourt. pp. 6-8. ISBN 0-547-48316-3.



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