

# Energiforsk Digitalisering inom energisektorn

## Watson & AI are transforming our world

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<https://www.ibm.com/blogs/think/se-sv/author/patrickcouch/>

 @couch\_patrick

# The Cognitive Era

# Welcome to the cognitive era.

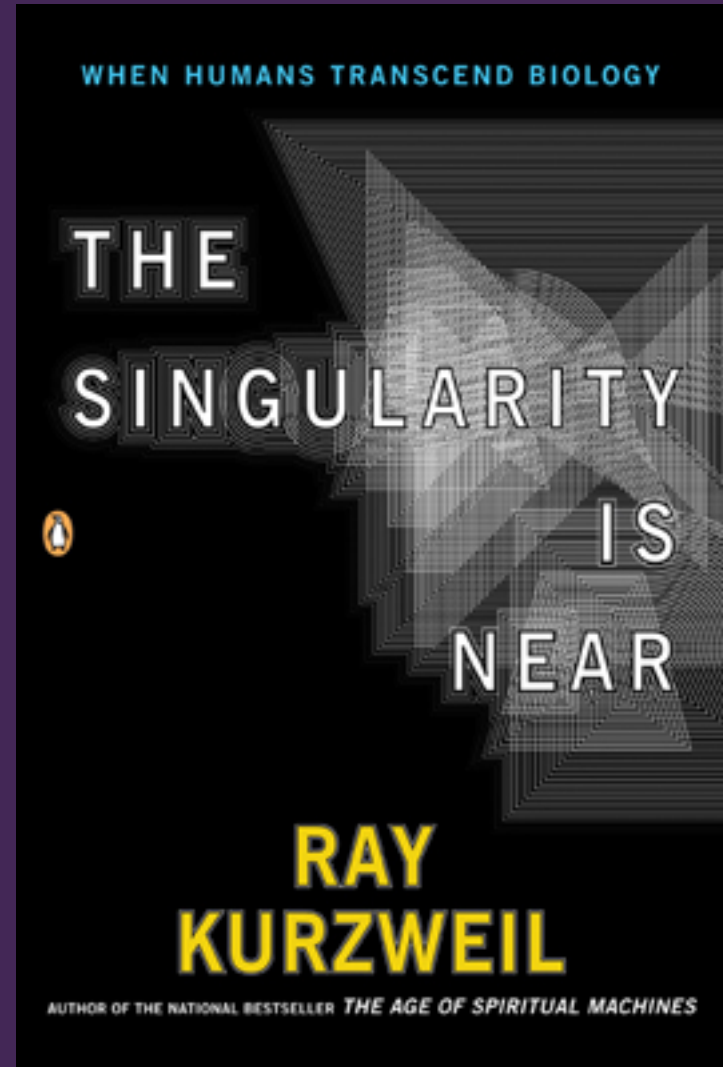
This is the age of breakthrough: an era in which digital business and digital intelligence become one—human expertise enhanced, scaled, accelerated to empower people and transform industries.

**cognitive** / 'käg-nə-tiv / adj.  
: of, relating to, or involving  
conscious mental activities  
(such as thinking, understanding,  
learning, and remembering)

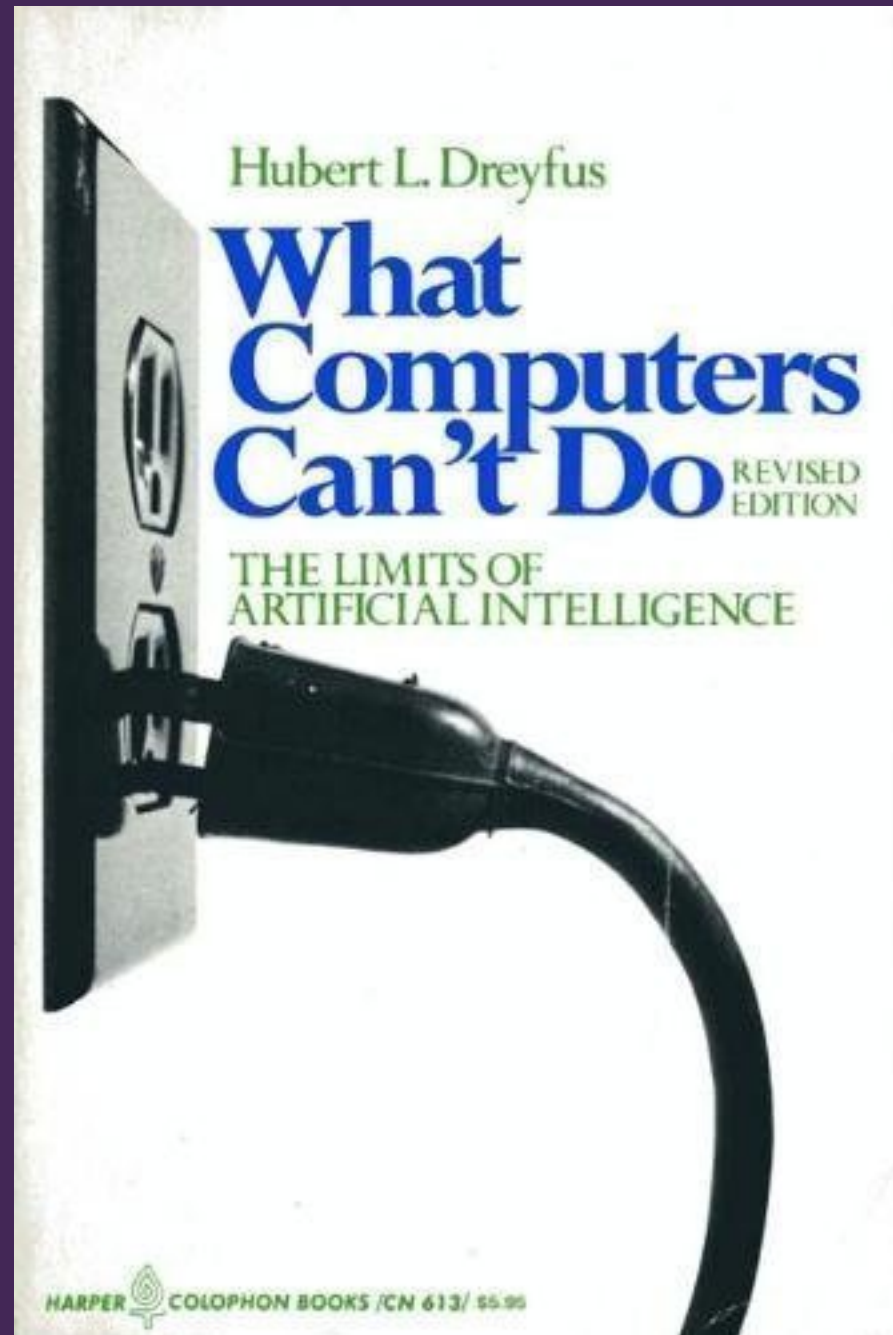


MARK HARRIS BACKCHANNEL 11.15.17 06:00 AM

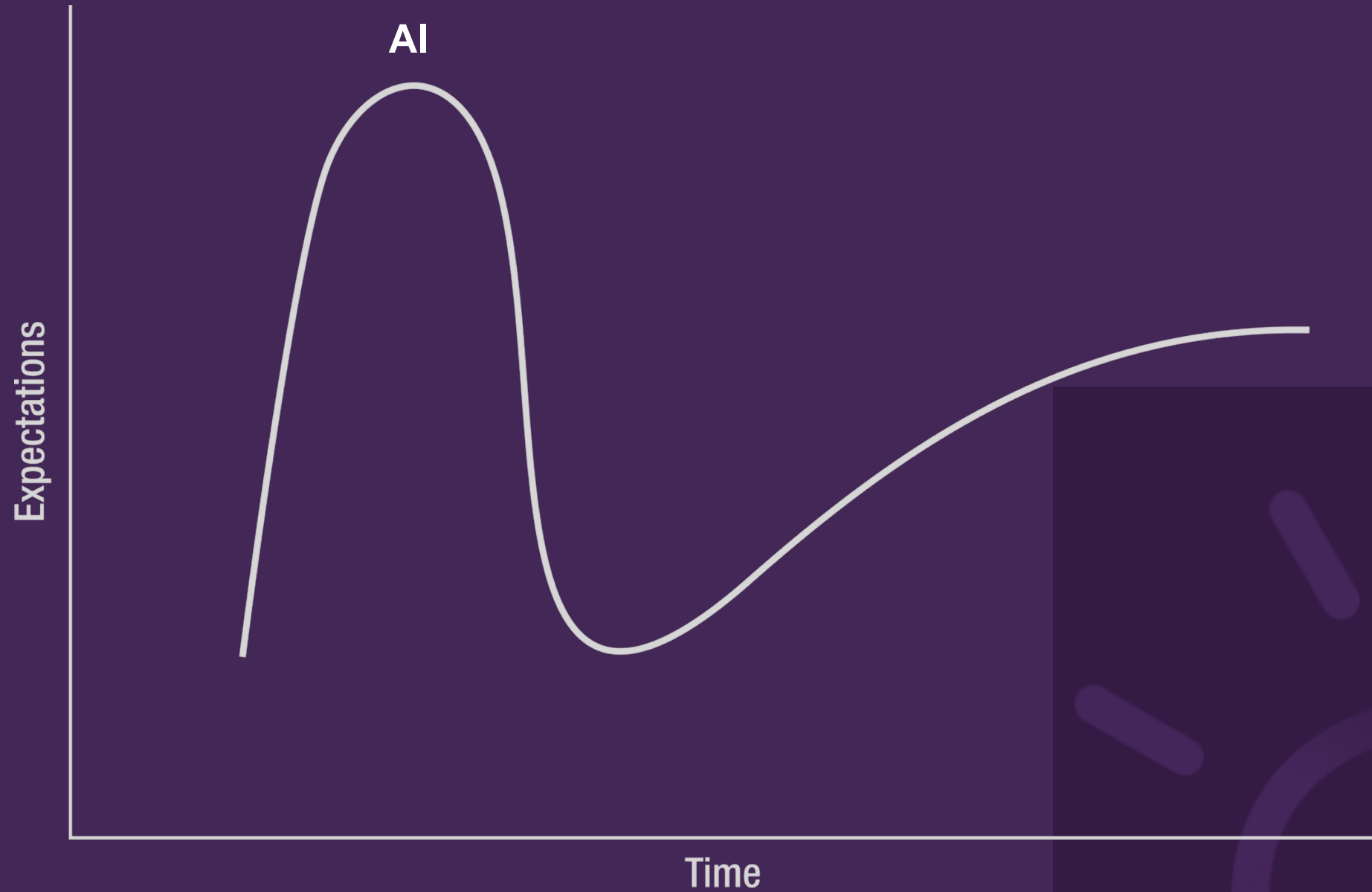
# INSIDE THE FIRST CHURCH OF ARTIFICIAL INTELLIGENCE











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# NEWS

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## Technology

### Stephen Hawking warns artificial intelligence could end mankind

By Rory Cellan-Jones  
Technology correspondent

🕒 2 December 2014 | Technology | 📄

👍 🐦 💬 📧 ➦ Share

## Forbes / Tech

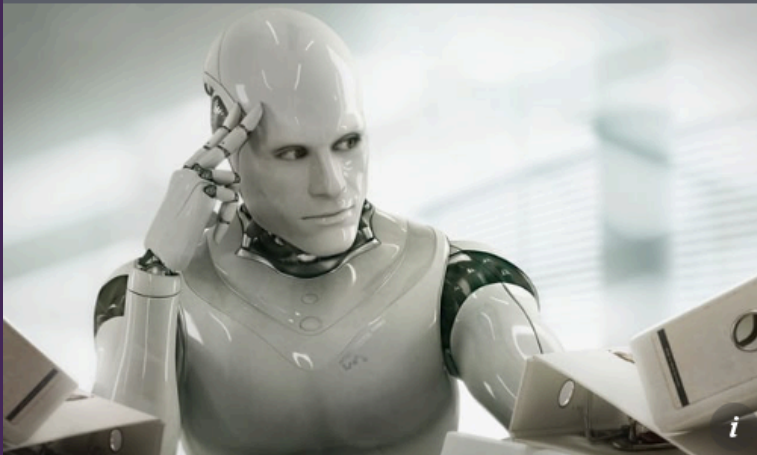
JAN 28, 2015 @ 05:15 PM 58,860 👁

### Bill Gates Says You Should Worry About Artificial Intelligence

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### Elon Musk: artificial intelligence is our biggest existential threat

The AI investor says that humanity risks 'summoning a demon' and calls for more regulatory oversight

👍 🐦 📧 ... 8,516 673

🕒 This article is 2 years old

**Samuel Gibbs**  
Monday 27 October 2014 10.26 GMT



For my ally is the Force, and a powerful ally  
it is.

Yoda 



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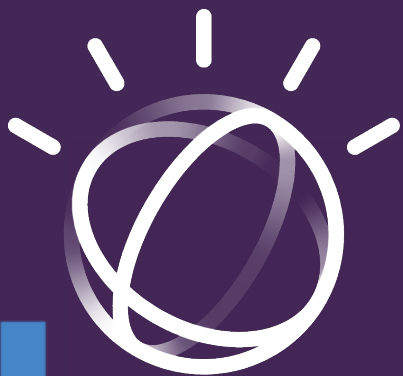








xai

you 

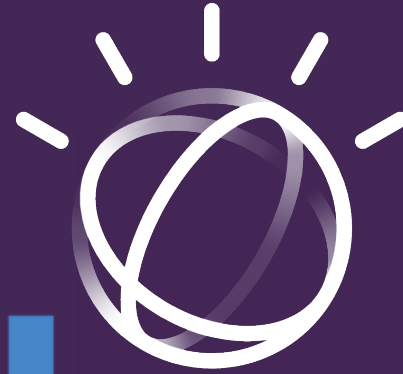
**I KEEP UP WITH  
ALL 74,000  
PAGES OF THE  
US TAX CODE  
ALONG WITH  
1000s OF  
YEARLY TAX  
LAW CHANGES.**



**I CAN HELP  
275,000 PEOPLE  
SETTLE PARKING  
TICKETS.**



**you**



**I CAN BE IN 30  
MILLION  
PLACES AT  
ONCE.**



**I CAN READ 5,000  
NEW MEDICAL  
STUDIES A DAY AND  
STILL SEE PATIENTS.**



 **@couch\_patrick**

With great power comes great responsibility.

Uncle Ben to Peter Parker (aka Spider-Man)



# Three principles for the Cognitive Era

1. Purpose
2. Transparency
3. Skills

# Learning to trust artificial intelligence systems

Accountability, compliance and ethics  
in the age of smart machines



**Dr. Guruduth Banavar**

Chief Science Officer, Cognitive Computing  
Vice President, IBM Research



**Partnership on AI**  
to benefit people and society

# Cognitive Technologies



Everything you think you know about AI is  
wrong.

Brian Fung, *Washington Post*

What is not talked about much in the media is that AI is really a portfolio of technologies.

Guruduth Banavar, *Vice President & Chief Science Officer, Cognitive Computing, IBM*



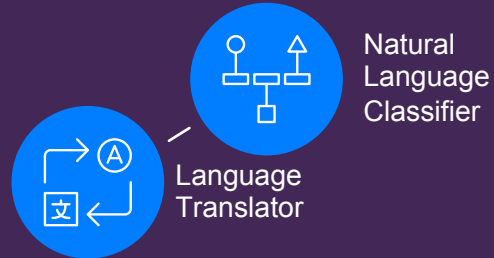
## Vision



## Speech



## Language



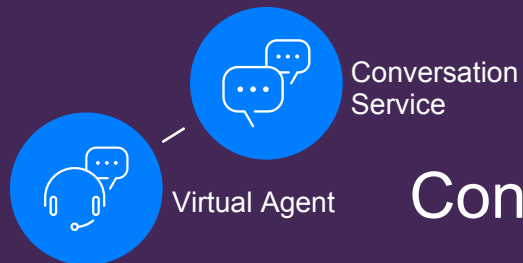
## Discovery



## Empathy



## Conversation



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Technology

## AI image recognition fooled by single pixel change

3 November 2017 Technology

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## Hackers send silent commands to speech recognition systems with ultrasound

Posted Sep 6, 2017 by Devin Coldewey

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# MAGIC AI: THESE ARE THE OPTICAL ILLUSIONS THAT TRICK, FOOL, AND FLUMMOX COMPUTERS

by James Vincent | @jjvincent | Apr 12, 2017, 12:04pm EDT  
Illustrations by William Joel

SCIENTIFIC AMERICAN. SUBSCRIBE

COMPUTING

## New AI Tech Can Mimic Any Voice

Emerging technologies in speech generation raise ethics and security concerns

By Bahar Gholipour on May 2, 2017

What is waiting around the corner?



Thank You!

 @couch\_patrick

# Hungry for more?

- Patrick Couch's blog on AI & Cognitive Technologies - [IBM Sveriges THINK blogg](#)
- More on Watson - [ibm.com/watson/](http://ibm.com/watson/)
- White paper on AI – [Learn to trust artificial intelligence systems](#)
- [Partnership on AI](#) – Established to study and formulate best practices on AI technologies, to advance the public's understanding of AI, and to serve as an open platform for discussion and engagement about AI and its influences on people and society

# Extras

# With Watson you can move millions of people smarter

KONE moves 1 billion passengers throughout the world every day, creating an enormous maintenance challenge

KONE equipped their elevators and escalators with IoT sensors, connected to the IBM Cloud and Watson, to analyze for wear and tear, bumpy ride, and misalignments

Solution makes preventative maintenance possible — saving downtime for KONE and their riders



Watson IoT



Retrieve and  
Rank





# With Watson you can redefine the customer experience

Staples Easy System with Watson, allows an office manager to place an order using any digital channel – website, call center, email, text message, or even the iconic Easy Button

Solution resulted in higher order frequency, larger average order sizes, and improved customer service scores



Conversation  
Service



Text to  
Speech



Retrieve  
and Rank



Speech  
to Text



Tone  
Analyzer



**STAPLES®**



# With Watson you can give one employee the insights of 1,000

Oil and gas platforms can cost \$500,000 per day to operate, and require real-time monitoring of thousands of inputs 24/7 by a crew living on top of 100,000 tons of steel in the middle of an ocean

With Watson, Woodside can analyze data from 80,000 sensors, 1 million documents, and 30 years of lessons learned from employees

Solution reduces time spent searching for expert knowledge by 75%



Watson IoT



Retrieve  
and Rank



Conversation  
Service



Document  
Conversion





# With Watson you can make banking personal

Bradesco customer support receives 30,000 calls per day related to customer support – an enormous expertise and workload challenge

With Watson, branch employees can now answer general and complex questions related to 59 products of Bradesco's retail banking portfolio – with customer satisfaction levels of higher than 85%

Solution covers 6,500 bank branches, more than 60,000 employees and is developed in 100% Brazilian Portuguese



Dialog



Retrieve  
and Rank



Natural  
Language  
Classifier



Document  
Conversion



**Bradesco**



# With Watson you can file taxes with confidence

The US tax code is complicated, dense, and constantly evolving – every tax return can be filed in multiple ways that the IRS accepts

Watson is helping H&R Block's 70,000 tax pros make sense of 74,000 pages of tax code, thousands of yearly tax law changes, and Block's 600 million data points

With Watson, Block's tax pros can quickly create highly personalized solutions to help individuals find every deduction, credit, and opportunity they deserve



Conversation Service



Natural Language Understanding



Retrieve and Rank



Tone Analyzer



**H&R  
BLOCK®**



# With Watson you can talk to customers on their terms

Autodesk was faced with the challenge of scaling real-time customer service and support after shifting to a subscription-based business model

With Watson, Autodesk created a solution that supports 20,000 conversations per month and recognizes 40 distinct use cases, freeing agents to focus on customers with complex issues

The solution cut resolution time from 1.5 days to just 5.4 minutes for most inquiries



Conversation  
Service



Natural Language  
Understanding



AUTODESK.



# With Watson you can transform personal healthcare

415 million adults with diabetes in the world – a number that could grow to 642 million by 2040

Cost of diabetes and prediabetes in US at \$322 billion

Sugar.IQ with Watson app features real-time, continuous glucose monitoring (CGM) to predict hypoglycemia 2 to 3 hours in advance, with an accuracy of 85-89%

With Watson, insights drive positive behavior changes among app users to control blood sugar levels



Watson IoT



# Medtronic







