AI in the news

Some recent headlines
Expensive lawyers under threat from artificial intelligence

The AI can even create a will.

By James Hetherington
November 13, 2017 17:11 GMT

HPE hails progress in using AI to build autonomous datacentres

Hardware giant claims to be the first in the industry to bring artificial intelligence-based infrastructure management software to market that can predict datacentre problems before humans can

This Algorithm Can Detect Pneumonia More Accurately Than a Radiologist

By Alex Wilson
Published on November 18, 2017

'Slaughterbot' film warns tiny drones could carry out murders

MARK BLUNDE Technolgy Reporter | 1 day ago | 2 comments

Watch, at your peril!
Session Overview

• History of AI and ML
• What is happening now
• Impact on Work, Jobs, Organisations and Society - Dystopia or Utopia?
• Impact on Leadership & Management
• Impact on Executive Education generally
• Impact on Unicon members’ Executive education
  – Impact on Course content, design and structure
  – Impact on student experience
  – Impact on Administration
• Urgency of Response needed
• What are you doing / what can you do / what must you do?
• Planning and Next steps
AI Winters

A 60 year history of high expectations and decade long periods of deep disappointment
AI Spring

In contrast we have today’s rapid flowering and accelerated growth
It is AI Spring because of the ecology of converging technologies.

- Natural Language Processing
- Machine Vision
- Machine Learning
- The Open Source movement
- Emotional and Psychological machine insight
- Dedicated AI software and hardware
- Social Robotics
- The Cloud

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The anatomy of AI & ML

Automated

Examples of Main Areas
- Deterministic Rules & Processes & Decisions
- Robotics
- Event Processing
- Predictive Knowledge Management
- Natural Language Processing (NLP)

Example Sub Areas
- Rules Engines & BPM
- Robotic Process (RPA)
- Chat Bots / Virtual Assist
- Simple Events
- Complex Events (CEP)
- Deep Q&A System
- Text (other) to Speech
- Translation
- Speech (other) to Text
- Image to Text

Result
- Automate Repetitive Task
- Alerts
- Likely Answers
- Automated Speech
- Automated Writing
- Automated Grouping

Intelligence

Examples of Main Areas
- Machine Learning (ML)
- Unsupervised Learning
- Reinforced Learning
- Supervised Learning
- Deep (NN) Learning
- Classic Models (Bayes, GA, Regression, Trees, etc.)

Example Sub Areas
- Image Recognition
- Classify (Text, etc.)
- Numeric Prediction
- Probability Assessment
- Optimization (LP, etc.)

Result
- Predictive Recommendations, Scores, Actions; Ranking, Forecasts

Source: vincejeffs.com

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Artificial Intelligence Will Add $15.7 Trillion to the Global Economy: PwC

By Daniel Liberto | Updated June 29, 2017 — 6:18 AM EDT

Machines capable of carrying out tasks normally reserved for humans will boost global GDP by as much as 14 percent by 2030, according to PwC.


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“AI is the most important technology that anybody on the planet is working on today.”

Dave Coplin, chief envisioning officer at Microsoft UK, May 2016

http://uk.businessinsider.com/microsoft-exec-ai-is-the-most-important-technology-that-anybody-on-the-planet-is-working-on-today-2016-5?
Andrew Ng: AI is the New Electricity

September 20, 2017 (20:33) by Yashad Kulkarni (@helloyashad)

Devin Coldewey talks to Andrew Ng about what makes an AI-first company, his vision for an AI-powered society, and the transformation of education.
An example of disruptive AI in action: chatbot-underwriters and chatbot claims handlers

https://youtu.be/flSI2JmWVE
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- Dedicated AI software and hardware
- OpenAI
- The Open Source movement
- Emotional and Psychological machine insight

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$29.7B across 3512 deals from Q4'12 to Q4'17 QTD
We are already experiencing AI on our every day interactions.
and in our work environments
Introducing machine learning to the SMART FACTORY

MATERIAL QUALITY PREDICTION

ENERGY EFFICIENCY OPTIMIZATION

MACHINE FAILURE PREDICTION

https://ferolabs.com/
Machine Learning Is Redefining The Enterprise

**Manufacturing**
- Predictive maintenance or condition monitoring
- Warranty reserve estimation
- Propensity to buy
- Demand forecasting
- Process optimization
- Telematics

**Retail**
- Predictive inventory planning
- Recommendation engines
- Upsell and cross-channel marketing
- Market segmentation and targeting
- Customer ROI and lifetime value

**Healthcare and Life Sciences**
- Alerts and diagnostics from real-time patient data
- Disease identification and risk stratification
- Patient triage optimization
- Proactive health management
- Healthcare provider sentiment analysis

**Travel and Hospitality**
- Aircraft scheduling
- Dynamic pricing
- Social media – consumer feedback and interaction analysis
- Customer complaint resolution
- Traffic patterns and congestion management

**Financial Services**
- Risk analytics and regulation
- Customer Segmentation
- Cross-selling and up-selling
- Sales and marketing campaign management
- Credit worthiness evaluation

**Energy, Feedstock, and Utilities**
- Power usage analytics
- Seismic data processing
- Carbon emissions and trading
- Customer-specific pricing
- Smart grid management
- Energy demand and supply optimization

**Source:** Tata Consultancy Services, Using Big Data for Machine Learning Analytics in Manufacturing – TCS
100 STARTUPS USING ARTIFICIAL INTELLIGENCE TO TRANSFORM INDUSTRIES

CONVERSATIONAL AI/ BOTS

VISION

AUTO

ROBOTICS

CYBERSECURITY

BUSINESS INTELLIGENCE & ANALYTICS

CORE AI

AD, SALES, CRM

HEALTHCARE

FINTECH & INSURANCE

OTHER

A ranking of the 100 most promising private artificial intelligence companies in the world.

https://www.cbinsights.com/research-ai-100

106 STARTUPS TRANSFORMING HEALTHCARE WITH AI

PATIENT DATA & RISK ANALYTICS
- Roam
- Pricio
- Lumidata
- Sensodata
- Medalogic
- MedAware
- Zephyr Health
- iCarbonx
- Heath

LIFESTYLE MANAGEMENT & MONITORING
- AiCure
- PeterWell
- Wellframe
- Healint
- Lucina
- Skymet
- Welltok
- Intentu
- OverHealth
- HI

EMERGENCY ROOM & SURGERY
- Gauss Surgical
- MetaPak
- MyHealth
- P3d

IN-PATIENT CARE & HOSPITAL MANAGEMENT
- Qualaris
- Amaza
- AnalyticsMD
- Ivlon

MISCELLANEOUS
- Digital Reasoning
- Saykara
- Potbotics
- Narrator AI
- H2O
- Burst

RESEARCH
- Arrowhead
- Arterys
- Enlitic
- BayLabs
- Zebras

MEDICAL IMAGING & DIAGNOSTICS
- MoveMD
- Deep Genomics
- Enlitic
- BayLabs
- Zebra

MENTAL HEALTH
- TAO
- Ginger.io

DRUG DISCOVERY
- Atomwise
- BenevolentAI

VIRTUAL ASSISTANTS
- Buoy
- Sense.ly
- Babylon

WEARABLES
- Touchkin
- physIQ
- TinyKicks
- ATLAS

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In our banks, we have people behaving like robots doing mechanical things. Tomorrow, we're going to have robots behaving like people,
John Cryan, CEO of Deutsche Bank, Sept 2017

So, how does all this impact the workplace and those who work there?
“In our banks, we have people behaving like robots doing mechanical things. Tomorrow, we’re going to have robots behaving like people,”

John Cryan CEO of Deutsche Bank, Sept 2017
The Bank of England believes that machines might take over 80 million American and 15 million British jobs over the next 10 to 20 years, or 50% of the workforce in each of the two countries.

“These machines are different,” the bank’s chief economist Andy Haldane said. “Unlike in the past, they have the potential to substitute for human brains as well as hands.”

According to the bank, administrative, clerical and production workers might be the first to be replaced by robots in the coming years.

That’s not to say unemployment will suddenly rise. Humans will “adapt their skills to the tasks where they continue to have a comparative advantage over machines.”
Robots to steal 15million of your jobs, says bank chief: Doom-laden Carney warns middle classes will be 'hollowed out' by new technology

- Mark Carney warned in a speech many jobs would be 'hollowed out'
- Huge technological advances meant roles could be automated instead
- Entire professions, such as accountancy, could be pushed to the brink

By HUGO DUNCAN DEPUTY FINANCE EDITOR FOR THE DAILY MAIL
PUBLISHED: 00:33, 6 December 2016 | UPDATED: 10:14, 6 December 2016
‘How technology will transform the work of human experts’


https://youtu.be/Dp5_1QPLps0

https://youtu.be/ulXwTpW2oFI

https://youtu.be/Dp5_1QPLps0

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JPMorgan software does in seconds what took lawyers 360,000 hours

A new era of automation is now in overdrive as cheap computing power converges with fears of losing customers to startups

Hugh Son  |  Tuesday 28 February 2017 10:51 GMT  |  


Artificial Intelligence Analyzes Gravitational Lenses 10 Million Times Faster

SLAC and Stanford researchers demonstrate that brain-mimicking ‘neural networks’ can revolutionize the way astrophysicists analyze their most complex data, including extreme distortions in spacetime that are crucial for our understanding of the universe.

August 30, 2017

http://www.nature.com/nature/journal/v548/n7669/full/nature23463.html
In recently-conducted trials, the AI-powered system was able to spot colorectal adenomas from magnified endoscopic images. The images were matched against 30,000 others that were used for machine learning.

The system analysed more than 300 colorectal adenomas in 250 patients, taking less than a second to assess each magnified endoscopic image and determine the malignancy of the tumours with 94 percent accuracy, researchers claim.

"The most remarkable breakthrough with this system is that AI enables real-time optical biopsy of colorectal polyps during colonoscopy, regardless of the endoscopists' skill," said study leader Dr Yuichi Mori from Showa University in Yokohama, Japan, who presented the results at United European Gastroenterology Week in Barcelona, Spain.
But its not just professional jobs . .
Why digital assistants will soon make call centres obsolete

Rapid advancement in NLP means consumers will soon be able to chat with digital assistants in the same way they would with humans, doing away with the need for call centres.

Dale Beaumont

Dale Beaumont is the founder and CEO of 8RIN, the world’s first artificially intelligent business advisor.
Self-driving trucks: what's the future for America's 3.5 million truckers?

The race is on to get driverless trucks on the roads, and experts say the impact on professional drivers ‘is going to be huge’

One startup is already promising to retrofit vehicles with driverless capabilities for just $30,000. The average trucker’s wage is around $40,000. Photograph: Matt Carr/Photonica
THE FUTURE?

or
Table discussions

What has all this got to do with our institutions anyway?
Chatbot Offers University Places

We Meet Dougal Scaife at Leeds Beckett University to discuss ‘Becky’ the Chatbot influencing the future of learning

Chatbots In Education: Applications Of Chatbot Technologies

HOW INSTANT MESSAGING AND CHATBOTS ARE TRANSFORMING STUDENT RECRUITMENT FOR THE HYPER-CONNECTED GENERATION

Date posted: January 18, 2017

PENN CHATBOT PROVIDES BETTER ACCESS TO INFORMATION

Fishman & Partners
Jill an artificially intelligent teaching assistant was introduced in January by Professor Ashock Goel for his Georgia Institute of Technology online computer sciences programme in spring 2016 online. For most of the semester, the students were unaware that the "Jill Watson" responding to their queries was an AI. She even answered questions with a touch of personality.
Table discussions

Let’s now work in groups around your tables to unpack the impact the many dimensions of AI’s impact and how we might respond.

I will type up your notes and distribute these before the conference is over.

Use the worksheets provided, one per table, with one of you responsible for writing down issues, responses and actions.
Impact on Management – and implications for us and our services

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Impact of Leadership – and implications for us and our services

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Impact on local and global economy – and implications for us and our services

Fishman & Partners
Impact on the business ethics – and implications for us and our services
Impact on course content, design and how we teach it
Impact on University administration

Fishman & Partners
Impact on student experience

Fishman & Partners
Impact on supply and demand for our programmes and other services

Fishman & Partners
Impact on how work is organized and delivered – and implications for us and our services
Urgency of Response?
ARE YOU READY?
So what might you personally do next?

Well you might want to invest personal time in reading, exploring and reflecting
So what might you personally do next?

- Join LinkedIn AI groups

**Artificial Intelligence Applications**

0 members

ABOUT THIS GROUP

This group is for all aspects of Artificial Intelligence (AI): Artificial Neural Networks, Genetic Algorithms, Extracting Meaning from Text, Data Mining, Chaos Theory, the Fractals, and applications in Time Series Forecasting in Industrial Process Control, Science Discovery, Signal-Noise filters.
So what might you personally do next?

• Subscribe to AI & ML newsletters:

[Image of Fishman & Partners logo]
So what might you personally do next?

• Watch these great Two Minute videos:

https://www.youtube.com/user/keeroyz
Use a news aggregators such as www.flipboard.com

Recommended channels:
• Artificial Intelligence
• Robots
• Ideas for the Future
• Chatbots
• The Future of HR
• Machine Learning

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You might want to try some programming yourself

• **Watson Developer Cloud** A collection of REST APIs and SDKs that use cognitive computing to solve complex problems.

• **Sentiment and Emotion Application**

• **Speech To Speech translation** The application uses IBM's speech recognition, machine translation, and voice synthesis capabilities to instantly translate speech to another language and read the translation aloud.

• **Social Customer Care** monitors social media, understands brand customer needs or requests and responds proactively. This sample application demonstrates how to gather personality and brand intelligence from tweets and responds with an appropriate next best action.

• **Text Message Chatbot**. This starter kit uses Watson Conversation, AlchemyLanguage APIs, and the Weather API to demonstrate how to create an intuitive natural language conversation chatbot that connects to other services.
  • [https://github.com/watson-developer-cloud/text-bot?](https://github.com/watson-developer-cloud/text-bot?)

• And link to Google APIs [https://cloud.google.com/ml/](https://cloud.google.com/ml/) and on Github [https://github.com/google](https://github.com/google) including Deep Dream
  • [https://github.com/google/deepdream](https://github.com/google/deepdream)

• **How to build your own AI assistant**
  • [https://www.sitepoint.com/how-to-build-your-own-ai-assistant-using-api-ai/](https://www.sitepoint.com/how-to-build-your-own-ai-assistant-using-api-ai/)
BUILD YOUR CAREER IN AI

Take our new Deep Learning courses, now open on Coursera

Enroll Now

ANDREW NG
#deeplearningai
So what might you do next? Some thoughts:

• Learn more about the emergent capabilities of AI and Social Robotics
• Bring your department up to speed
• Help your senior colleagues understand the trends and their potential impact on your business
• Initiate cross-institution strategic conversations
• Engage your academic and administrative colleagues in the strategic conversations
• Manage the AI vendors, not them you
• Shape the change management agenda and be influential leaders in your organisation’s transformation
A time to grow or a time to retrench?

A. A great time to learn, grow and adapt
B. A time to retrench and defend the work niche I have established
C. Too early to figure out
D. I think I’ll bury my head in the sand
E. I’ll ask my Robo Advisor
ARE YOU READY?

YOUR ORGANISATIONS
And to figure that out we’ll reconvene at tomorrow’s workshop
One final thought
AI will never be as primitive as it is today