

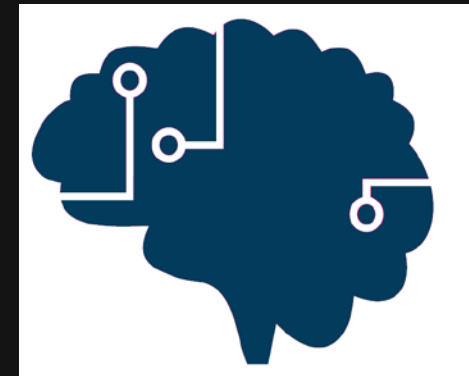
The Rise of Artificial Intelligence in Insurance

An overview of where we are and where came – hype vs reality

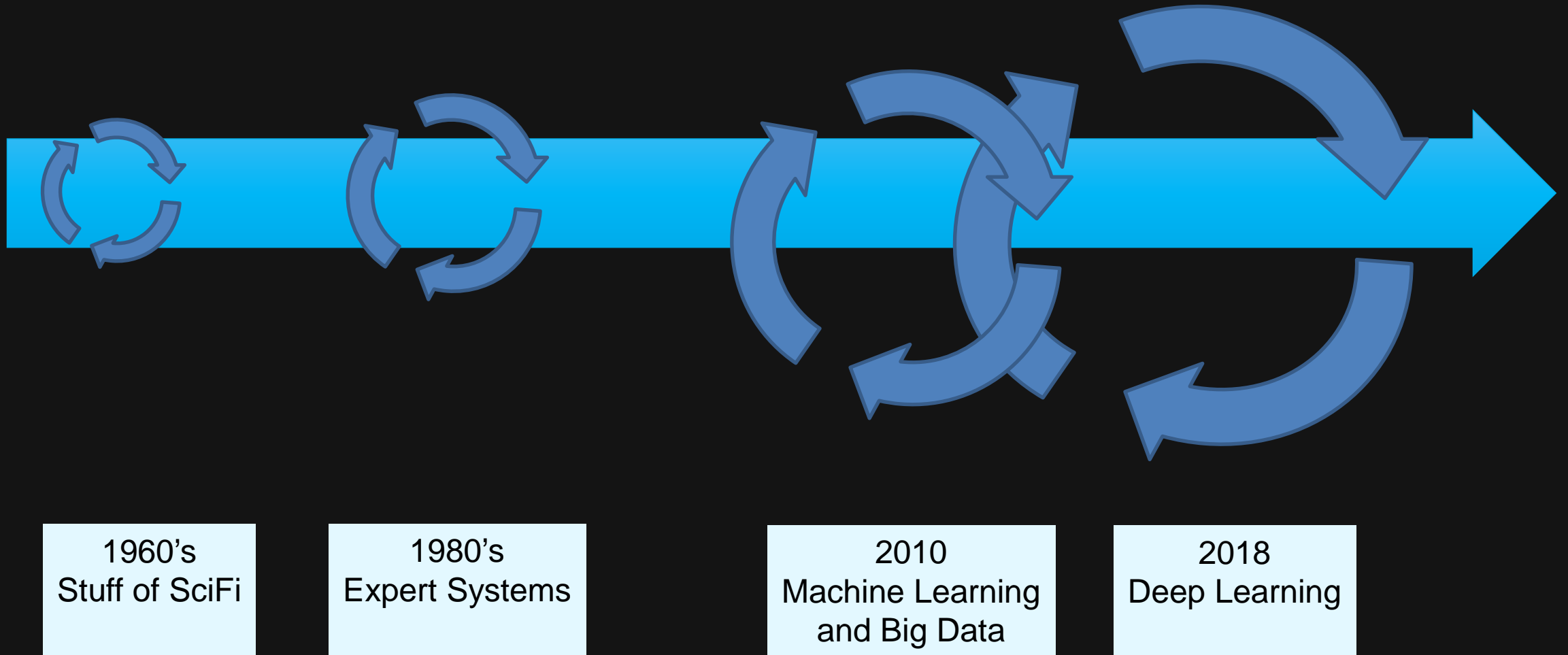
September 26th, 2018

Exiger is a global regulatory and financial crime, risk and compliance company. Exiger arms financial institutions, multinational corporations and government agencies with the practical advice and **advanced technology solutions** they need to analyze and respond to risk, remediate major issues and monitor ongoing business activities.

Dan Adamson is Exiger's global head of cognitive computing, and is an expert on vertical search and cognitive computing, with more than 15 years in the industry. He helped launch Bing, Microsoft's search engine, and holds several search algorithm and cognitive computing patents, has been named among the most influential "must-see" thought leaders in AI and Fintech, in addition to being a recipient of numerous academic awards, and holds an MSc from U.C. Berkeley.



The Rise of Artificial Intelligence... again



The Rise of Big Data

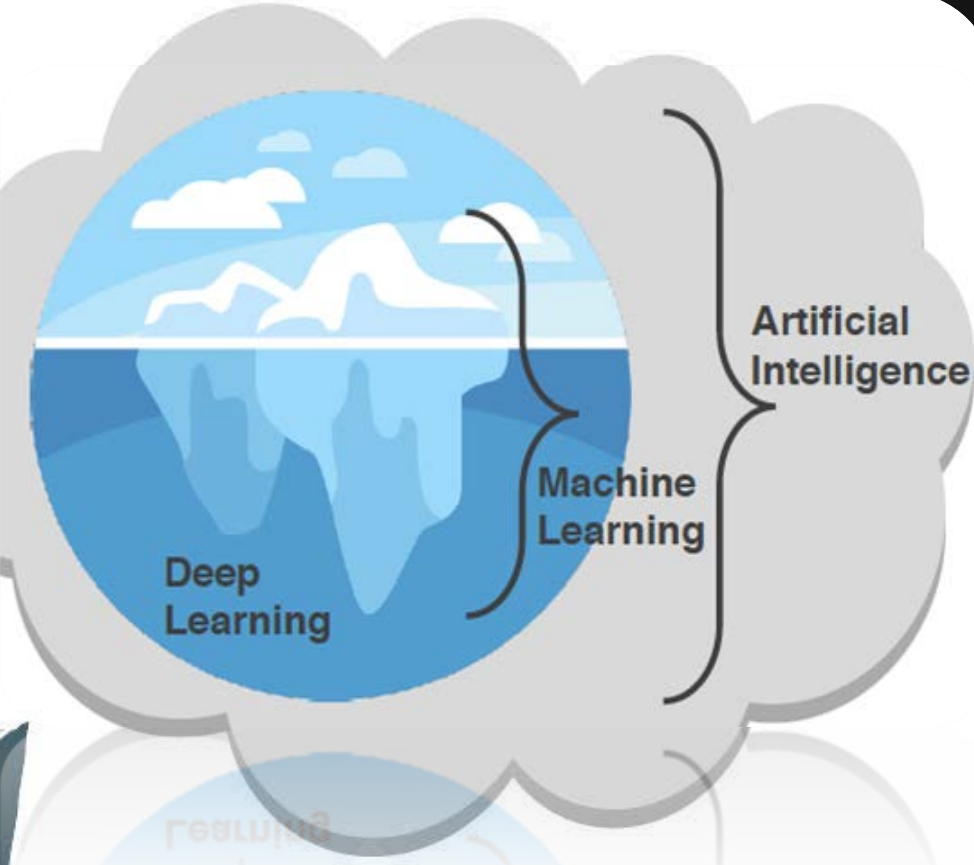
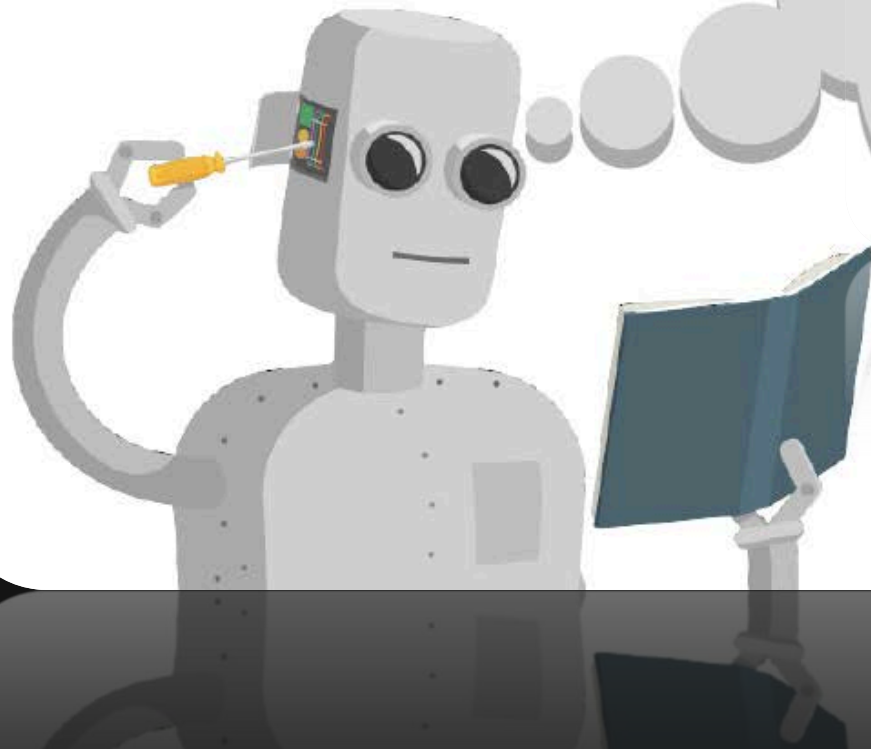
Top Picks for Tyler



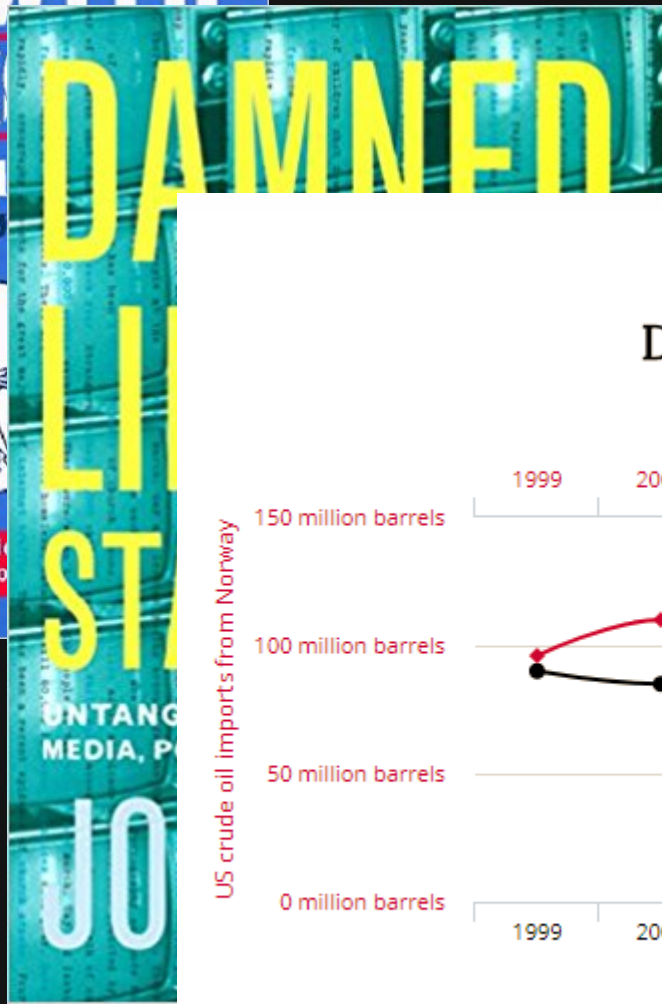
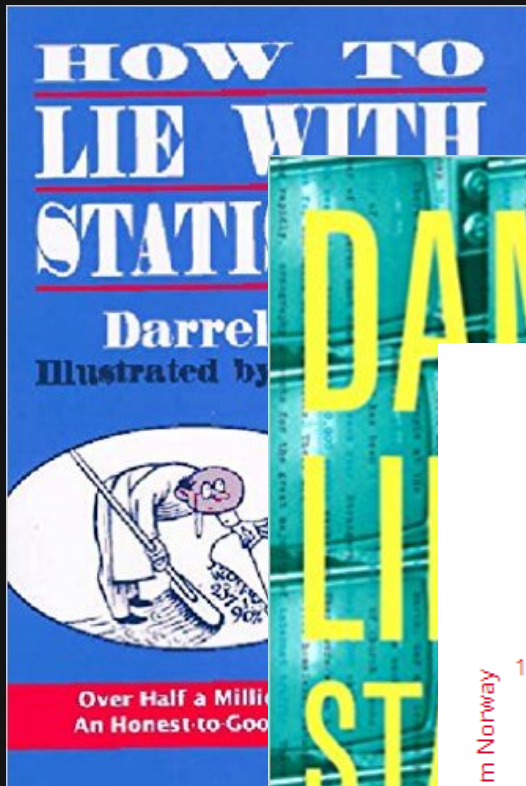
Comedies



Cognitive Computing

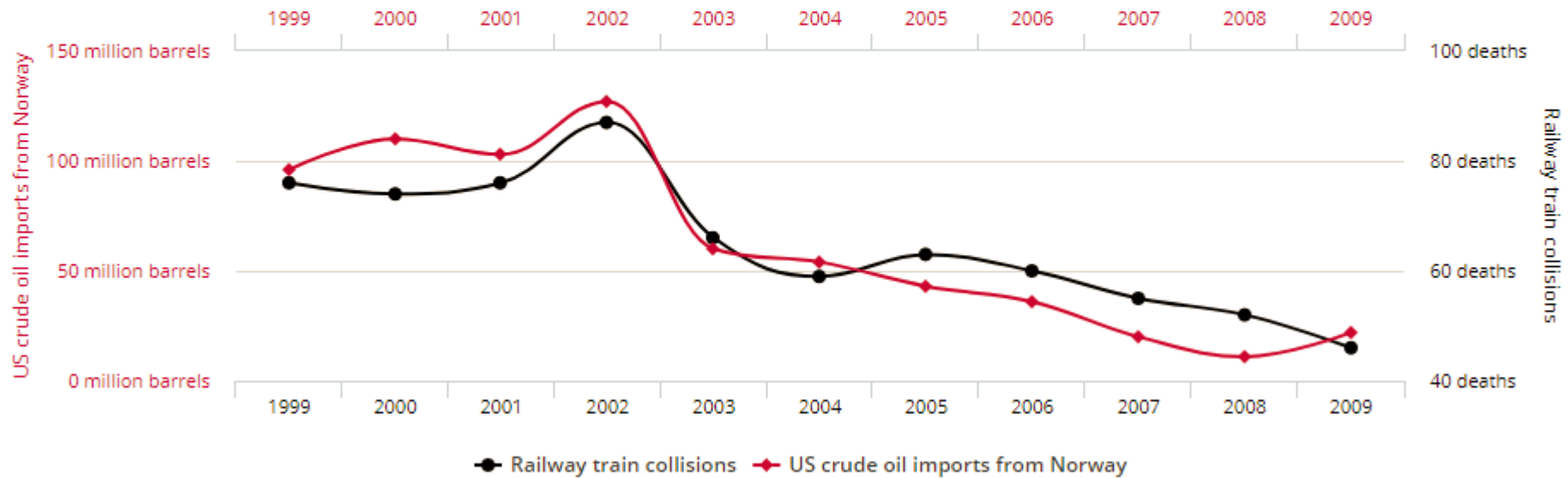






US crude oil imports from Norway correlates with Drivers killed in collision with railway train

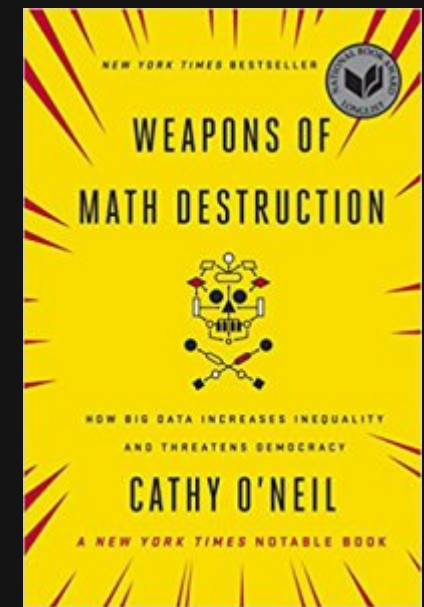
Correlation: 95.45% ($r=0.954509$)



Data sources: Dept. of Energy and Centers for Disease Control & Prevention

tylervigen.com

Accenture plc. Class A Ordinary





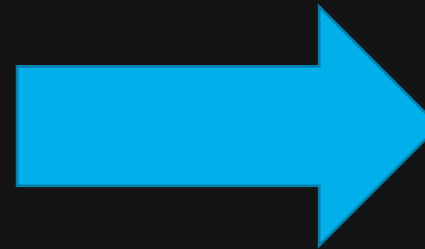
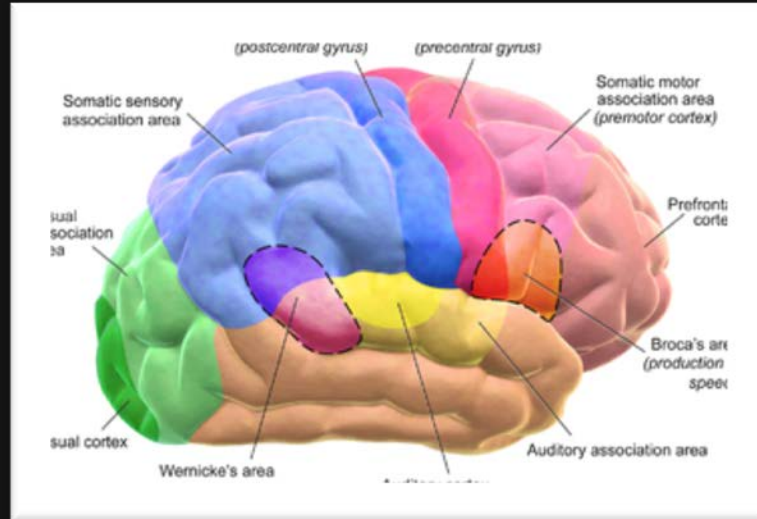
The Journal of Irreproducible Results

George H. Scherr

Note: This is not the actual book cover



So where do we go from here?



$$\int_a^b f(x) dx = \int_{-1}^1 f\left(\frac{b-a}{2}\zeta + \frac{b+a}{2}\right) \left(\frac{b-a}{2} d\zeta\right)$$

$$= \frac{b-a}{2} \int_{-1}^1 g(\zeta) d\zeta = \frac{b-a}{2} \sum_{k=1}^n w(\zeta_k) g(\zeta_k) + R_n(\zeta)$$

$$= \frac{b-a}{2} \sum_{k=1}^n w(\zeta_k) f\left(\frac{b-a}{2} \zeta_k + \frac{b+a}{2}\right) + R_n(\zeta)$$

where $\zeta = \frac{2x-b-a}{b-a}$, i.e., $x = \frac{b-a}{2}\zeta + \frac{b+a}{2}$, $-1 < \zeta < 1$.

ζ_k is the k th zero of $P_n(\zeta)$.

$$w(\zeta_k) = \frac{2}{(1-\zeta_k^2) \left[P_n'(\zeta_k) \right]^2}$$

$$g(\zeta) = f\left(\frac{b-a}{2} \zeta + \frac{b+a}{2}\right)$$

$$R_n(\zeta) = \frac{2^{2n+1} (n!)^4}{(2n+1) [(2n)!]^3} g^{(2n)}(\zeta)$$

Explainability in practice

The screenshot shows a search interface with a list of search filters and results. The filters are:

- and(terms("東方明珠石油有限公司"), or(terms("僱傭"), terms("辭職"), terms("辭聘"), terms("成立"), terms("創立"), terms("創始人"), terms("CEO"), terms("首席執行官"), terms("法人代表"), terms("股東"), terms("總裁"))) - BCA 0 Bing News 0 Bing Web 0 Google Web 10
- and(terms("東方明珠石油有限公司"), or(terms("詐騙"), terms("指控"), terms("被騙"), terms("虛假"), terms("欺詐"), terms("騙局"))) - BCA 0 Bing News 0 Bing Web 0 Google Web 10
- and(terms("東方明珠石油有限公司"), or(terms("醜聞"), terms("陰謀"), terms("謀毒"), terms("被禁"), terms("貪污"), terms("賄賂"))) - BCA 0 Bing News 0 Bing Web 0 Google Web 10
- and(terms("東方明珠石油有限公司"), or(terms("行賄"), terms("洗錢"), terms("可疑"), terms("制裁"), terms("制裁措施"), terms("申訴"))) - BCA 0 Bing News 0 Bing Web 0 Google Web 10
- and(terms("東方明珠石油有限公司"), or(terms("侵犯"), terms("違反"), terms("擾亂"), terms("歧視"), terms("違規"), terms("濫權"))) - BCA 0 Bing News 0 Bing Web 0 Google Web 10
- and(terms("東方明珠石油有限公司"), or(terms("壟斷"), terms("腐敗"), terms("貪腐"), terms("背誓"), terms("反叛"), terms("有嫌疑"))) - BCA 0 Bing News 0 Bing Web 0 Google Web 9
- and(terms("東方明珠石油有限公司"), or(terms("龐氏騙局"), terms("侵占"), terms("盜用"), terms("詐騙"))) - BCA 0 Bing News 0 Bing Web 0 Google Web 8

The results section shows:

- 法庭, terms("法院"), terms("訴") - BCA 0 Bing News 0 Bing Web 0 Google Web 10
- 法, terms("判決"), terms("裁決") - BCA 0 Bing News 0 Bing Web 99 Google Web 10
- 朗, terms("阿富汗"), terms("阿") - BCA 0 Bing News 0 Bing Web 100 Google Web 10

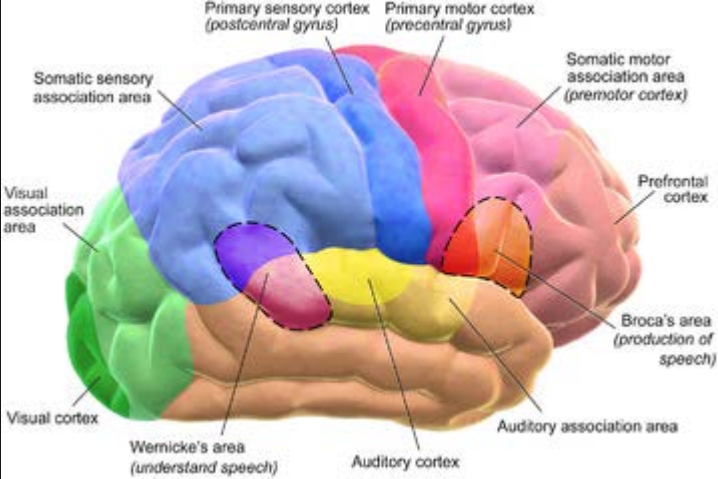
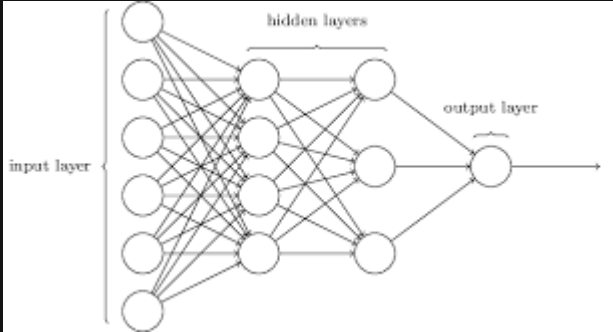
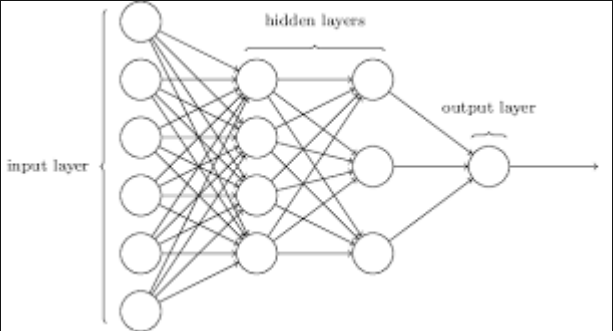
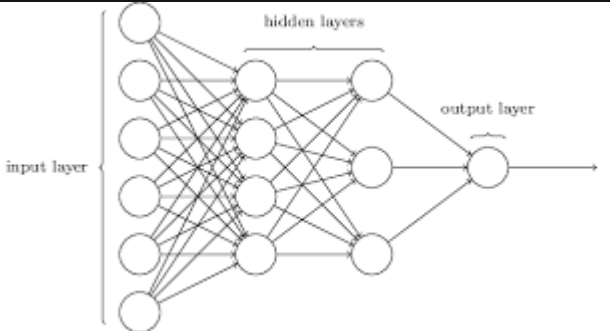
The screenshot shows the DDIQ interface for 'GOOD PRACTICE LIMITED'. The interface includes a navigation bar with 'Build', 'View Profiles', 'mnagaraja', and 'Log Out'. The main content area is divided into sections:

- General Information**
- Regulatory**
- Adverse** (highlighted in orange):
 - Investigation Related
 - Legal Issue
 - Reputational Issue
- Legal**
- Filters:**
 - Confidence:** A slider with a Wi-Fi icon and a double-headed arrow.
 - Date From:** []
 - Date To:** []
 - Buttons: Last 30 days | Last year | Last 5 years
 - Hide Adjudicated Content
 - Clear Filters** (orange button)

The search results are displayed in a list format:

- Possible Legal Issue** (Mar 31, 2016):
 - Removed: **DDIQ Association Discount** (DDIQ auto-discounted (Jun 2, 2016))
 - Good Practice Guide Project Pro Health Improve Medical Services for Victims of Human TRafficking | Asociatia PRO REFUGIU (prorefugiu.org)
 - Good Practice Guide Project Pro Health Improve Medical Services for Victims of Human TRafficking March 31, 2016
 - Removed: **Name Mismatch** (DDIQ auto-discounted (Jun 2, 2016))
- Possible Reputational Issue** (Mar 23, 2016):
 - World Cup 2018: FIFA sanctions seven nations - Goal.com (www.goal.com)
 - ... incidents, FIFA has put in place a comprehensive strategy to tackle discrimination, which includes the FIFA **Good Practice** Guide on Diversity and Anti-Discrimination, training, awareness-raising and the support of member ...
 - Removed: **Name Mismatch** (DDIQ auto-discounted (Jun 2, 2016))

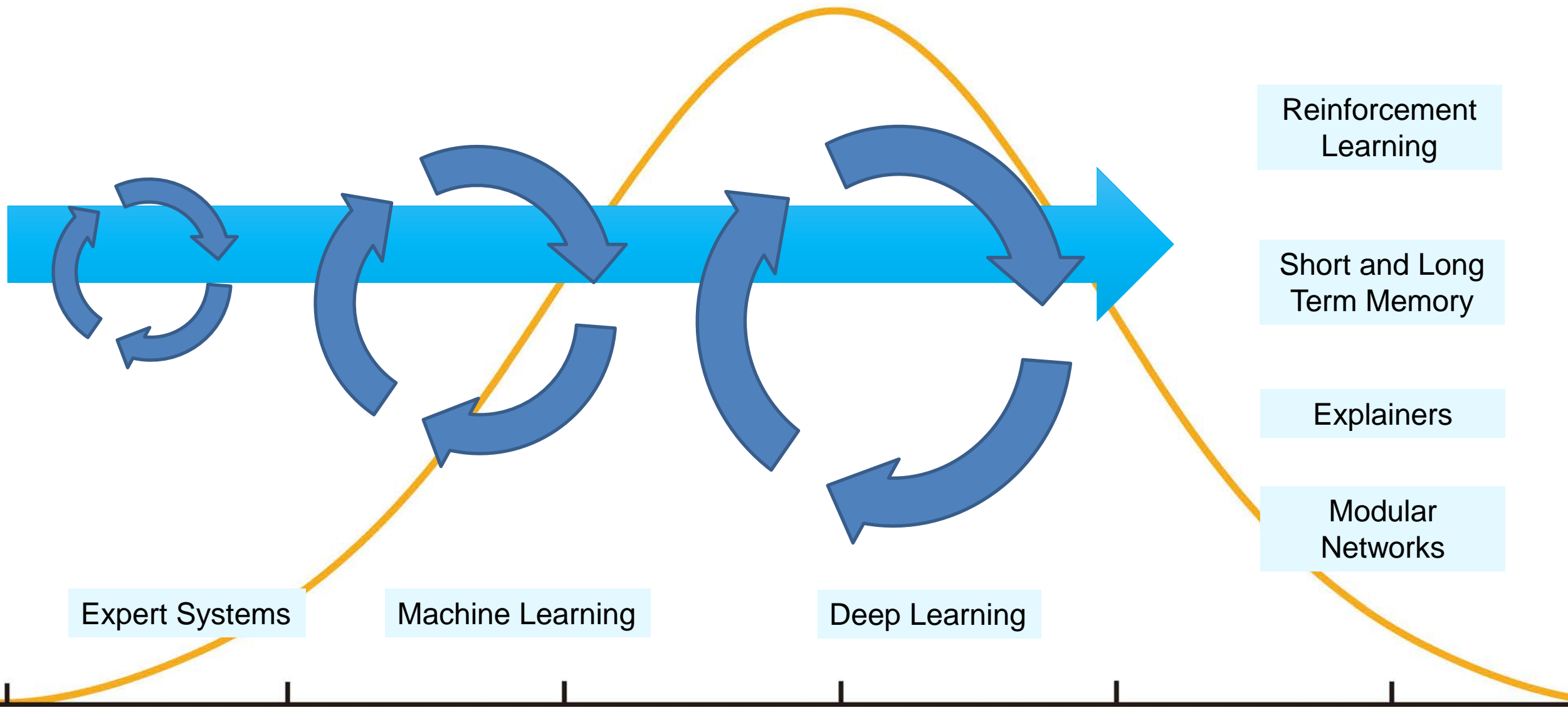
Modular Networks: Interweaving Intelligence



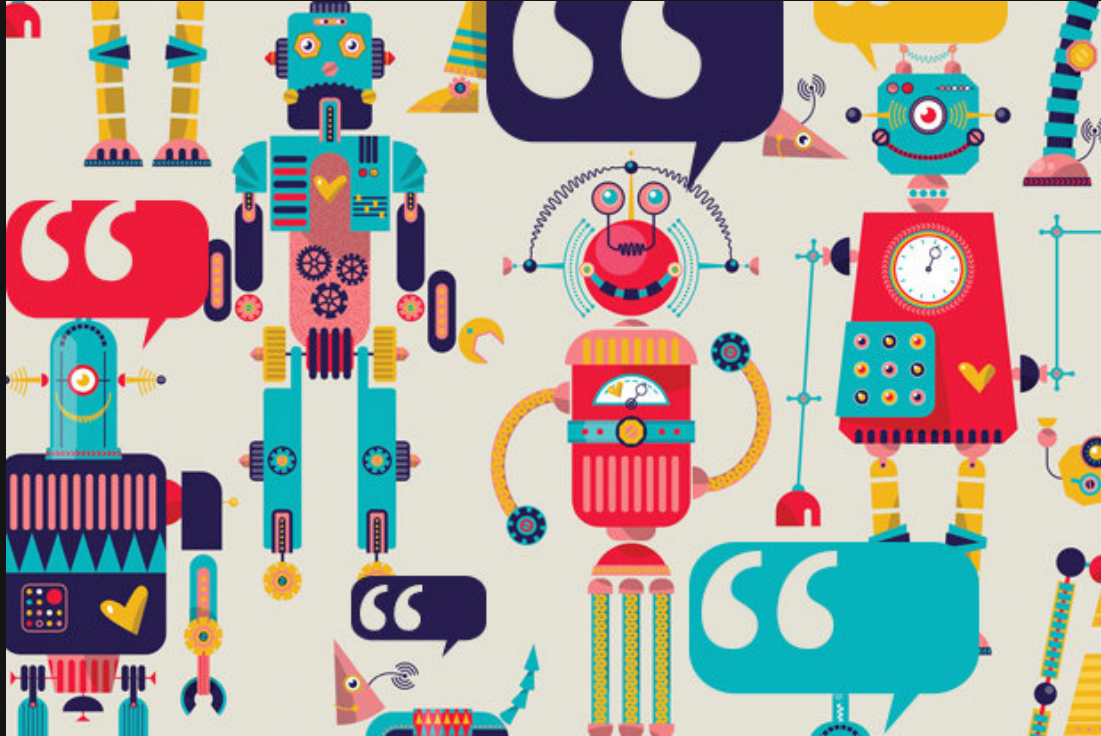
Blausen.com staff (2014). "[Medical gallery of Blausen Medical 2014](#)". *WikiJournal of Medicine*1 (2). DOI:10.15347/wjm/2014.010. ISSN 2002-4436.

Reinforcement Learning





Real World Example: Chatbots

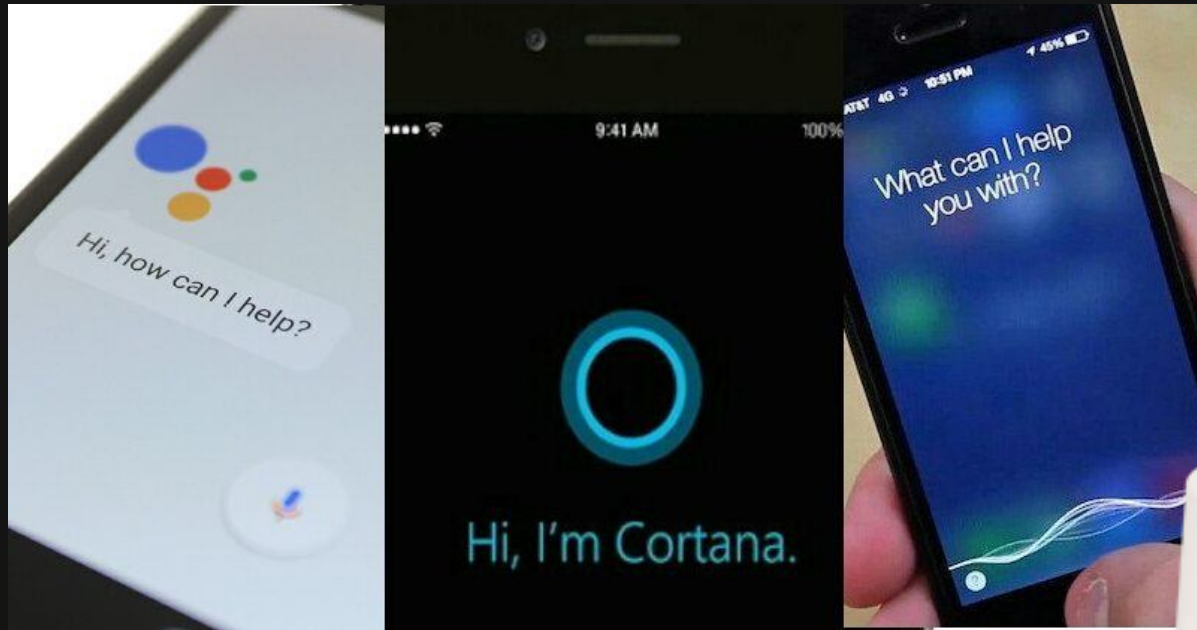


template-based systems



open-context frameworks

AI Assistants



Summary of recommendations:

1. Actually, the same rules apply (AI... is math)
2. Explainability should be a requirement
3. Reproducibility may be a requirement
4. ...and good business practice