

## DISCOVER THE POWER OF ARTIFICIAL INTELLIGENCE, EXPERIENCE THE AUGMENTED AND VIRTUAL REALITY









Forum e-Health

Will A.I. replace doctors in medicine?

September 14-15, 2017

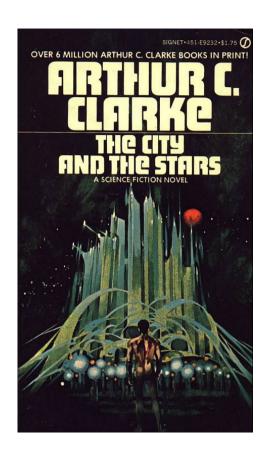
www.cta.ai





Jules Verne (1828-1905) - Anything one man can imagine, other men can make real.





# **Arthur C. Clarke - "The City and the Stars"**, 1956 - The first Virtual Reality Games.

[...] You could go into these phantom worlds with your friends, seeking the excitement that did not exist in Diaspar—and as long as the dream lasted there was no way in which it could be distinguished from reality. [...]

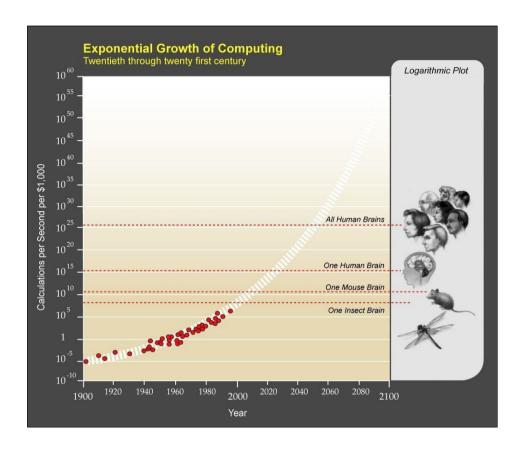




Stanisław Lem - "Dialogs", 1957.

[...] Creation of elektrobrains is an origin of evolution of artificial thinking centers. Potentially, they could become independent from human the way independent became, in centuries past, effects of his social, manufacturing activities. Resulting from arise of society work division, specificity of productive tools, manner of production created a machine that after becoming independent from human will started to more and more weight on individual's life up to the point when, during some ages, people started to treat this machine - a state - with almost godlike worship [...]

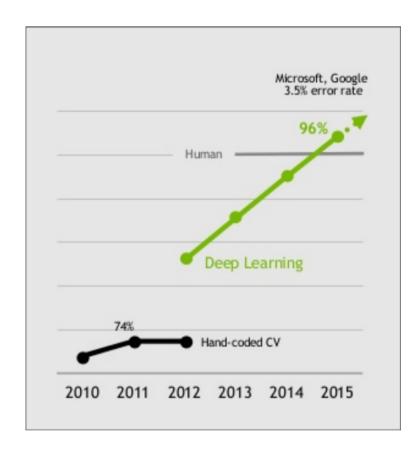




# **Raymond Kurzweil vision vs. Gordon Moore law.**

[...] To summarize the mind-blowing future projection of that graph, you'll be able to buy a human brain's worth of computing power for a thousand bucks in 2020 (which means just about everyone will have it.) You'll be able to buy a machine with the computing power of all human minds combined for a thousand bucks by 2040 [...]





# Machine Learning achieves "SUPERHUMAN" results. GPU shift rapidly the Moore curve.

The big bang of modern A.I. Set off a string of "superhuman" achievements. In 2015, Google and Microsoft both beat the best human score in the ImageNet challenge. In 2016, DeepMind's AlphaGo recorded its historic win over Go Champion Lee Sedol and Microsoft achieved human parity in speech recognition.



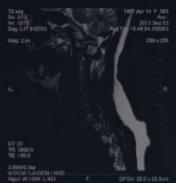
Machine Learning - GastroView project

# WE FIND AND TAG ANOMALIES IN CAPSULE ENDOSCOPY IMAGES

Due to Deep Learning algorithms implemented in GastroView, it is possible to shorten time of examination and analysis of image received from capsule endoscopy by maximum of 70%.



Machine Learning - MedScan project





# WE ANALYZE COMPUTED TOMOGRAPHY AND MAGNETIC RESONANCE IMAGING SCANS

We automatically search large collections of scans (CT or MRI) databases for medical cases that are similar to a given scan or region of interest (ROI)



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#### The New Hork Times

# **Technology**

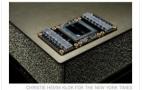
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#### Software Glitch or Russian Hackers? Election Problems **Draw Little Scrutiny**

A Times investigation has found that infiltration efforts were broader than previously disclosed and that state and federal agencies have conducted few forensic

2h ago · By NICOLE PERLROTH, MICHAEL WINES and MATTHEW ROSENBERG



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Nvidia, a maker of graphics processing units, is riding an artificial intelligence boom to put its chips in drones, robots and self-driving cars.

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# Why a 24-Year-Old Chipmaker Is One of Tech's Hot Prospects

Nvidia, a maker of graphics processing units, is riding an artificial intelligence boom to put its chips in drones, robots and self-driving cars.

By DON CLARK SEPT. 1, 2017

SANTA CLARA, Calif. - Engineers at CTA.ai, an imaging-technology start-up in Poland, are trying to popularize a more comfortable alternative to the colonoscopy. To do so, they are using computer chips that are best known to video game fans.

The chips are made by the Silicon Valley company Nvidia. Its technology can help sift speedily through images taken by pill-size sensors that patients swallow, allowing doctors to detect intestinal disorders 70 percent faster than if they pored over videos. As a result, procedures cost less and diagnoses are more accurate, said Mateusz Marmolowski, CTA's chief executive.

Health care applications like the one CTA is pioneering are among Nvidia's many new targets. The company's chips — known as graphics processing units, or GPUs - are finding homes in drones, robots, selfdriving cars, servers, supercomputers and virtual-reality gear. A key reason for their spread is how rapidly the chips can handle complex artificial-intelligence tasks like image, facial and speech recognition.



# **Open questions:**

### Are we - as human beings - ready for the new times?

- What about dogmas there are deep in our hearts and souls faith etc.?
- What about our professions?
- What about massive set of unemployed?

**Elon Musk** - has launched a company that hopes to link your brain to a computer.

Ray Kurzweil - The Singularity Is Near: When Humans Transcend Biology.

Andrew Ng (baidu) - Al is the new electricity.

**Yann LeCun (facebook)** – [...] so far, we've seen only 5% of what Al can do.

Devin Wenig (ebay) - If you don't have an Al strategy, you are going to die in the world that's coming.