

Facts about AI

every developer needs to know before focusing on machine learning

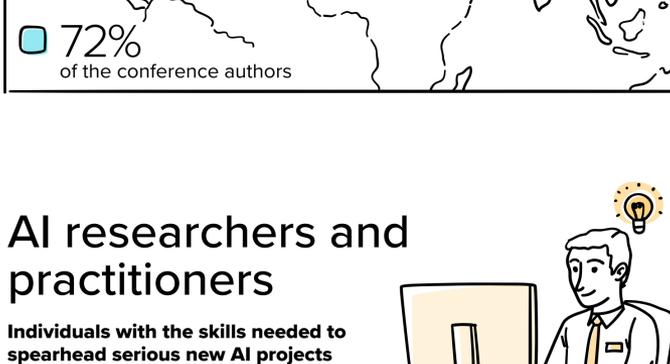
Universities

teaching machine learning and related subjects

2500 universities around the world

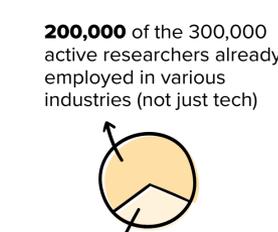


Where experts are working



AI researchers and practitioners

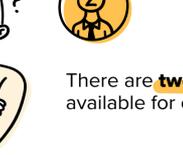
Individuals with the skills needed to spearhead serious new AI projects



Currently, there are **10,000** stellar individuals worldwide

22,000 Ph.D-educated researchers working on AI

3,000 currently seeking work



200,000 of the 300,000 active researchers already employed in various industries (not just tech)



100,000 are still studying

Salaries

\$300,000 - \$500,000 / year



The median salary is **\$127,000**

in the U.S. for data scientists, senior data scientists, artificial intelligence consultants, and machine learning managers.

The share of jobs requiring AI skills has grown **4.5 times** since 2013

What are the most in-demand skills and tools for AI?



Machine Learning



Deep Learning



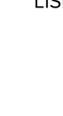
Natural Language Processing (NLP)



Python



Java



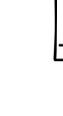
C++



Spark



MATLAB



Hadoop



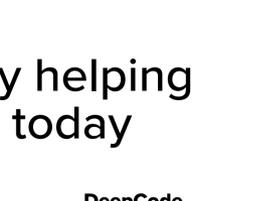
LISP



Prolog

Why AI

By 2021, 80% of emerging technologies will have AI foundations.

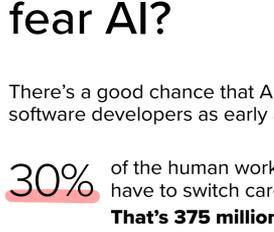


\$4.5 billion Automated customer service agents

\$2.7 billion Sales process recommendation and automation

\$2.7 billion Automated threat intelligence and prevention systems

AI is already helping developers today



DeepCode

analyzes and cleans up existing code

Logojoy

generates logos and simple designs

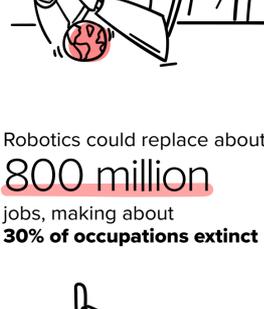
Ulzard

converts handwritten designs into HTML and CSS

Why do developers fear AI?

There's a good chance that AI will replace software developers as early as 2040.

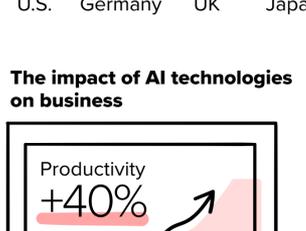
30% of the human workforce will have to switch careers by 2030
That's 375 million people!



My job will be replaced by artificial intelligence...
29.1% of software developers

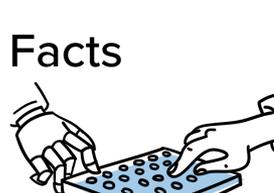
Robotics could replace about **800 million** jobs, making about **30% of occupations extinct**

Jobs at high risk of automation



Nearly **400 million people** will have to change careers.

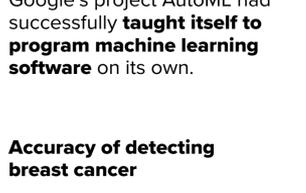
The impact of AI technologies on business



Cognitive technologies such as robots, AI, machine learning, and automation **will create**

9% of new U.S. jobs by 2025.

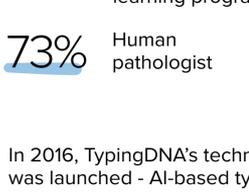
Facts



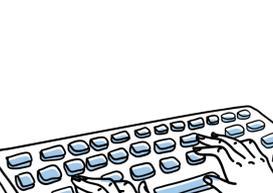
DeepMind's **AlphaGo** artificial intelligence defeated **Lee Sedol**, the Korean Go champion.



New York auction house Christie's sold Portrait of Edmond de Belamy, an algorithm-generated print in the style of 19th-century European portraiture, for **\$432,500**.



Google's project AutoML had successfully **taught itself to program machine learning software** on its own.



The Washington Post's "AI Writer" wrote more than **850 stories** during the Rio Olympics.

Accuracy of detecting breast cancer

89% Google's Deep Learning machine learning program

73% Human pathologist

In 2016, TypingDNA's technology was launched - AI-based typing patterns matching algorithms can **verify the identity of a user based solely on their typing behavior.**



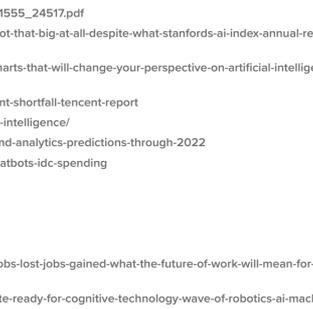
Where to get started

FACEBOOK AI
<https://research.fb.com/facebook-ai-academy/>

Google AI
<https://ai.google/education/>

Stanford
<https://www.coursera.org/learn/machine-learning>

NVIDIA
<https://www.nvidia.com/en-us/deep-learning-ai/education/>



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Resources

- https://www.tisi.org/Public/Uploads/file/20171201/20171201151555_24517.pdf
- <https://ifgagne.ai/talent-2019/>
- <https://www.stateofai2019.com/chapter-6-the-war-for-talent/>
- https://www.tisi.org/Public/Uploads/file/20171201/20171201151555_24517.pdf
- <https://ai.googleblog.com/2017/03/assisting-pathologists-in-detecting.html>
- <https://www.wired.com/beyond-the-beyond/2019/03/ian-bogost-tackling-generative-adversarial-ai/>
- <https://www.typingdna.com/>
- <https://www.washingtonpost.com/pr/wp/2016/08/05/the-washington-post-experiments-with-automated-storytelling-to-help-power-2016-rio-olympics-coverage/>
- <https://slate.com/technology/2017/10/google-created-machine-learning-software-that-can-program-machine-learning-software.html>
- <https://slate.com/technology/2016/03/googles-alphago-defeated-go-champion-lee-sedol-ken-jennings-explains-what-that-feels-like.html>
- <https://www.christies.com/features/A-collaboration-between-two-artists-one-human-one-a-machine-9332-1.aspx>
- <https://research.fb.com/facebook-ai-academy/>
- <https://ai.google/education/>
- <https://www.coursera.org/learn/machine-learning>
- <https://www.nvidia.com/en-us/deep-learning-ai/education/>