

321Code!

Autonome Autos. Lächeln für Orwell. Ritter der Kokosnuss?!

Morressier



Programmiersprachen



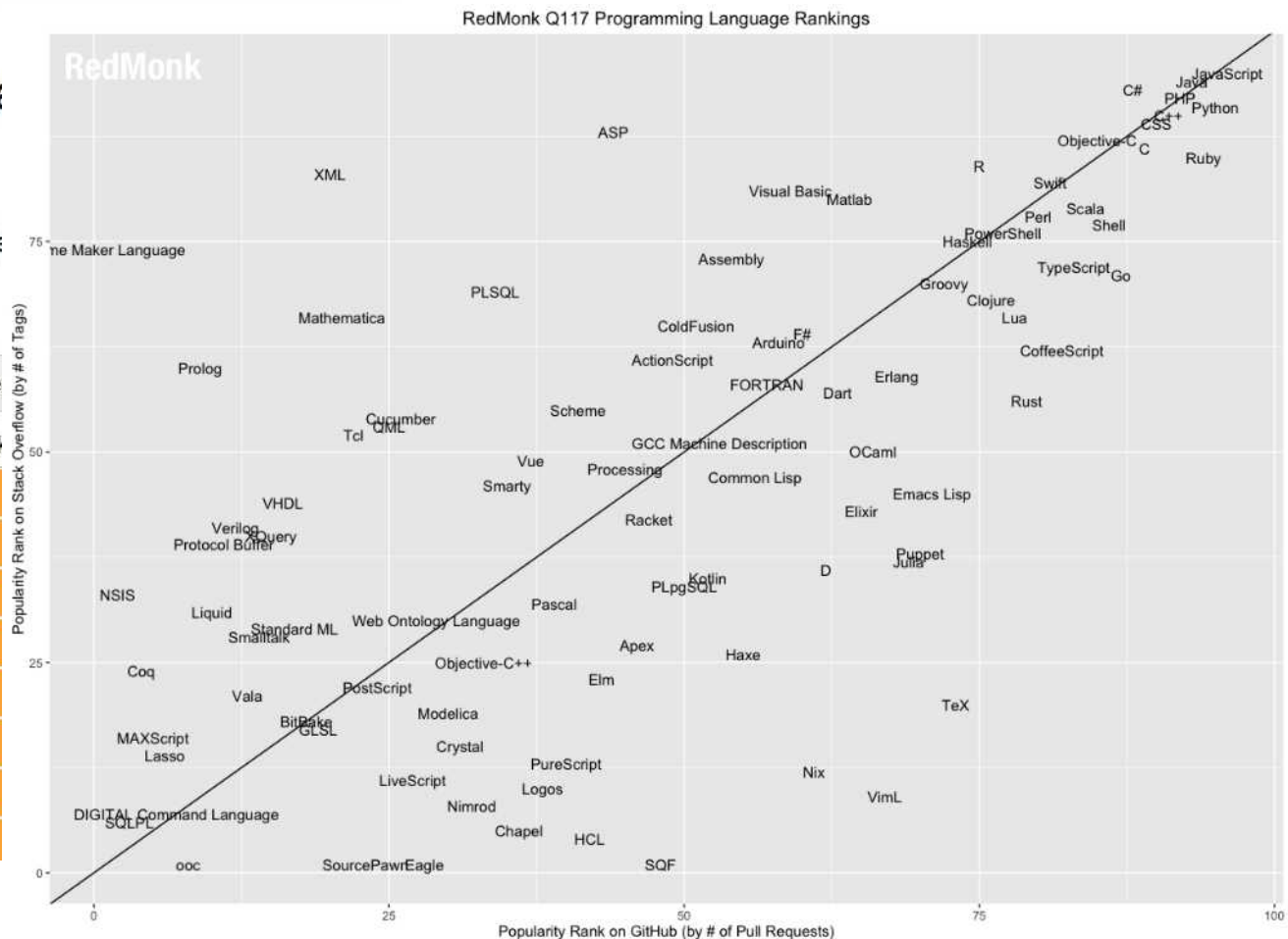
Interactive: The Top Programming Languages 2017

Interactive: The Top Programming Language

Language Types (click to hide)

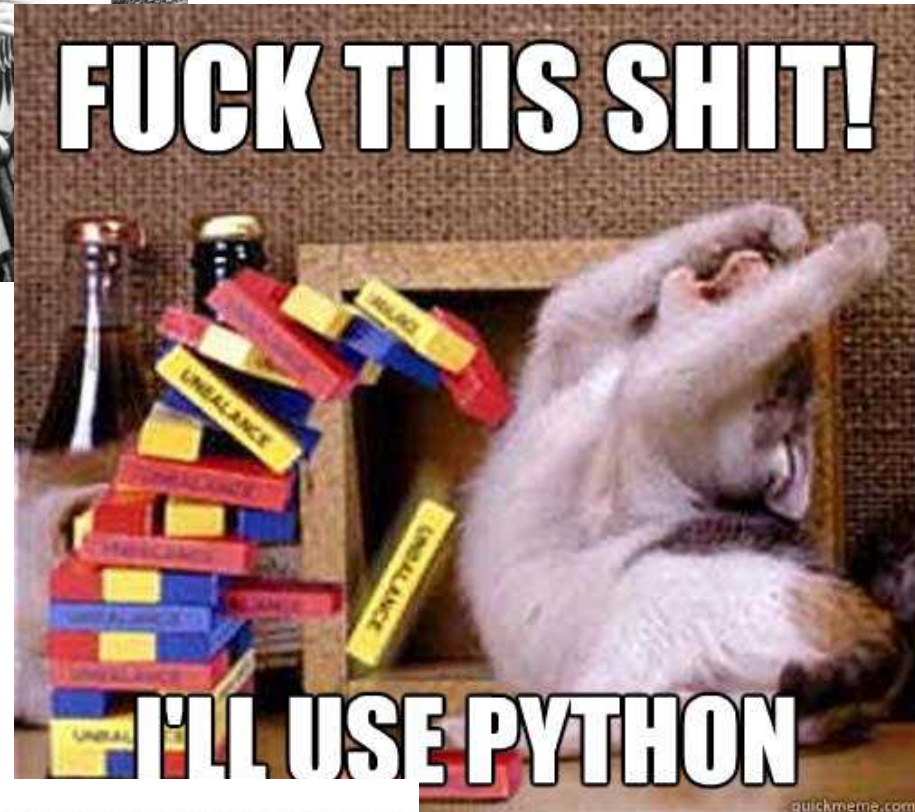


Language Rank	Types	Spectrum Rank
1. Python		100.0
2. C		99.7
3. Java		99.4
4. C++		97.2
5. C#		88.6
6. R		88.1
7. JavaScript		85.5
8. PHP		81.4





Programmiersprachen



Making references to Monty Python skits in documentation is not only allowed, it is encouraged!



3 Folien Python 0/3

```
$python3↓  
Python 3.6.1 (default, Mar 27 2017, 00:27:06)  
[GCC 6.3.1 20170306] on linux  
Type "help", "copyright", "credits" or "license" for more information.  
>>>
```

```
$python3 file.py↓
```



3 Folien Python 1/3

```
>>> # Funktionen
>>> def add(a, b):
...     return a + b
...
>>> add(2, 3)
5
```

```
>>> # Variablen
>>> fünf = add(2, 3)
>>> print(fünf)
5
>>> zwei, drei = 2, 3
>>> add(zwei, drei)
5
```

```
>>> # Zeichenketten (Strings)
>>> titel = '321Code!'
>>> print(titel)
321Code!
>>> titel.lower()
'321code!'
>>> titel.upper()
'321CODE!'
>>> titel.replace('321', '123')
'123Code!'
>>> titel * 2
'321Code!321Code!'
>>> len(titel)
8
```



3 Folien Python 2/3

```
>>> # Listen
>>> liste = [3, 2, 1]
>>> liste[2]
1
>>> print(liste)
[3, 2, 1]
>>> len(liste)
3
>>> liste.append('Code!')
>>> len(liste)
4

>>> # Tuple
>>> tuple = (3, 2, 1, 'Code!')
```

```
>>> # Kontrollstrukturen
>>> if len(liste) > 3:
...     print('Wahr')
... else:
...     print('Falsch')
...
Wahr
>>> if '3' in tuple:
...     print('Auch Wahr')
...
>>> if 3 in tuple:
...     print('Jetzt aber.')
...
Jetzt aber.
```



3 Folien Python 3/3

```
>>> # Schleifen
>>> for i in liste:
...     print(i)
...
3
2
1
```

Code!

```
>>> a = 5
>>> while a >= 0:
...     print(a)
...     a = a - 1
...
5
4
3
2
1
0
```



Coding Session

3 Folien Python 4/3

The Hitchhiker's Guide to Python

This opinionated guide exists to provide both novice and expert Python developers a best practice handbook to the installation, configuration, and usage of Python on a daily basis.

Get Updates

Receive updates on new releases and upcoming projects.



Say Thanks!

Installing Python 3 on Windows



Python Community Code of Conduct

The Python community is made up of members from around the globe with a diverse set of skills, personalities, and experiences. It is through these differences that our community experiences great successes and continued growth. When you're working with members of the community, we encourage you to follow these guidelines which help steer our interactions and strive to keep Python a positive, successful, and growing community.

First, download the latest version of Python 3.6 from the official website. If you want to be sure you are installing a fully up-to-date version, click the Downloads > Windows link from the

Python

<http://docs.python-guide.org/en/latest/starting/install3/win/>

[EN]

<https://py-tutorial-de.readthedocs.io/de/python-3.3/>

[DE]

<https://docs.python.org/3/tutorial/>

[EN]

OpenCV

http://docs.opencv.org/3.3.0/d6/d00/tutorial_py_root.html

[EN]

<http://docs.opencv.org/3.3.0/>

[EN]

<http://opencv-python-tutroals.readthedocs.io>

[EN]

So Are We Living in 1984?

Terrorabwehr

Polizei testet Gesichtserkennung an Berliner Bahnhof

Können Computer mit Kameras zuverlässig erkennen, wer bloß Passant und wer ein bekannter Gewalttäter ist? Ein Test in Berlin soll dies zeigen. Hunderte Freiwilliger machen mit.



VIDEOÜBERWACHUNG

Merkel erwartet Gesichtserkennung an allen Bahnhöfen

In einer Diskussionsrunde in Stuttgart hat sich Kanzlerin [Angela Merkel](#) ausführlich zur Digitalisierung geäußert. Dabei ging es neben der [Überwachung](#) auch wieder um die Programmierausbildung in der Schule. Aber sie will "kein



Jedes Überwachungsvideo,

das Gewalt zeigt, ist ein Beweis,
dass Videoüberwachung Ihnen
keine Sicherheit bringt.

Autonome XXXX



Autonome XXXX



First Zero-Emission, Fully-Autono Container Ship Planned for 2020

May 9, 2017 by Mike Schuler



Manned operation is planned to start in the latter half of 2018, with remote-operation begin autonomous operation starting in 2020. Credit: Yara/Kongsberg

Norwegian fertilizer producer Yara and maritime technology firm Kongsberg Gru what they say will be the world's first fully-electric and autonomous container fee

"The new zero-emission vessel will be a game-changer for global maritime trans the United Nations sustainability goals," the companies said on Tuesday.

MUTE MEM

Here's how Tesla, Uber, and Google are trying to revolutionize the trucking industry

BI

Danielle Muoio, Business Insider

20.06.2017, 15:07 619



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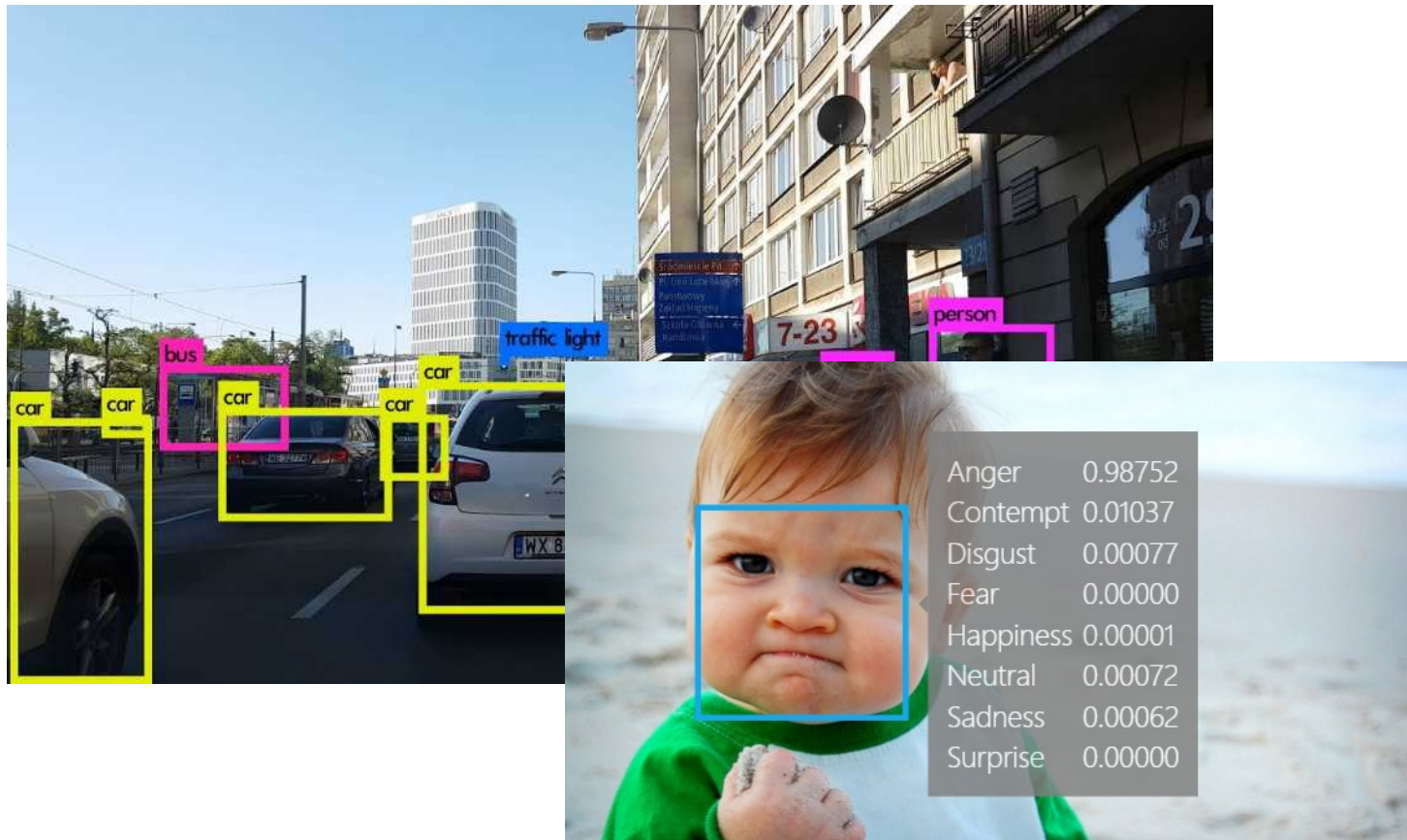
Daimler, the parent company of Mercedes, tests its autonomous big-rig on a highway. Daimler

Silicon Valley has its sights set on the trucking industry, and for good reason.

Every time we receive a package of randomly assorted Amazon items, it was likely delivered on the back of a massive big-rig driven by one of 1.7 million truck drivers in the US. It's important, and grueling, work that was thrown into national focus for a brief moment when President Donald Trump climbed into an



Artificial Intelligence



In Medizin?

How AI and Machine Learning are Aiding Schizophrenia Research

July 21, 2017 | Written by: Dr. Guillermo Cecchi

Categorized: Artificial Intelligence | Machine Learning

Share this post:



In the U.S. about 20 percent of adults suffer from a mental health condition, but only about 10 percent receive no treatment. While early identification, diagnosis, and treatment can help manage schizophrenia, there is no medical testing that can provide an absolute answer.

Earlier this year, IBM scientists collaborated with researchers at the University of California, San Francisco (UCSF) to publish new research regarding the use of machine learning to predict instances of schizophrenia with a 74 percent accuracy. The study found that the severity of specific symptoms in schizophrenia patients – such as hallucinations and delusions – can be used to help predict the likelihood of patients with schizophrenia.

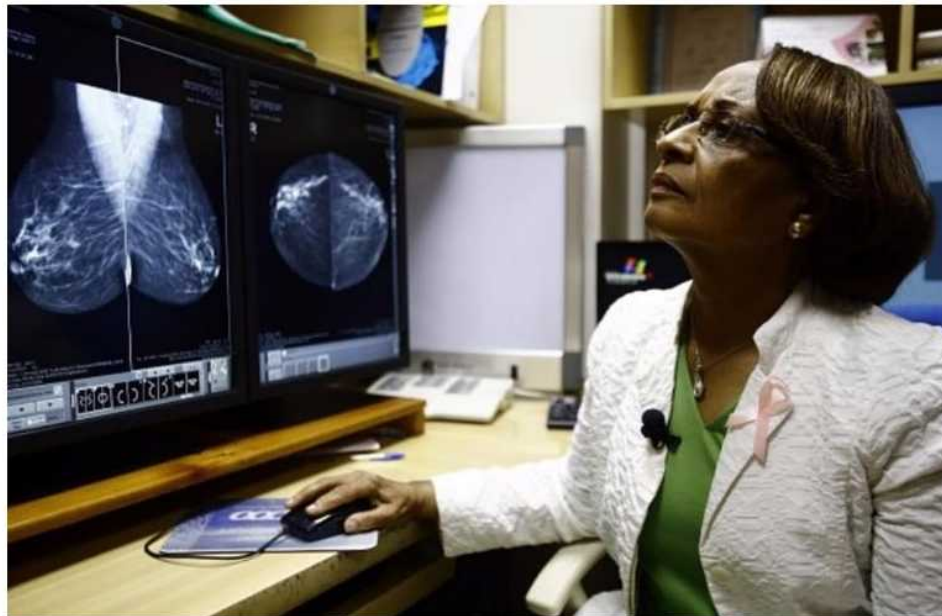
Computational psychiatry provides physicians with tools that enable them to make more accurate diagnoses than approaches had been subjective up until that point. In this schizophrenia research, IBM's machine learning algorithms were able to predict the likelihood of patients with schizophrenia.

Artificial Intelligence Is Helping Doctors Find Breast Cancer Risk 30 Times Faster



Janet Burns, CONTRIBUTOR
FULL BIO

Opinions expressed by Forbes Contributors are their own.



Sudanese radiologist Dr Hania Fadl speaks with reporters in 2015 at the Khartoum Breast Care Centre (KBCC), which she opened in 2010 and equipped with screening and anesthetic equipment despite financial advisers' warnings to abandon the project. (Photo credit Ashraf Shazly/AFP/Getty Images)

The mammogram is one of medical science's best tools for detecting breast cancer, but when the typically painful test reveals a potential problem, women frequently undergo breast biopsies for a closer look—a practice that's all too often unnecessary, according to a group of artificial intelligence (AI) researchers, and which doctors may be able to significantly reduce thanks to a little insight from computers.

Announced today, researchers from Houston Methodist have developed AI software that can interpret mammogram results a full 30 times quicker than doctors and with 99 percent accuracy, according to the team's recent study. Published in the journal *Cancer*, the study found that the software was able to intuitively translate patient charts into diagnostic information for human review at top speeds, which

<https://www.ibm.com/blogs/think/2017/07/ai-schizophrenia-research/>

<https://www.forbes.com/sites/janetwburns/2016/08/29/artificial-intelligence-can-help-doctors-assess-breast-cancer-risk-thirty-times-faster/#77b5d1e11e01>

In Creativity?

Artificial Intelligence

A New AI Can Write Music as Well as a Human Composer

IN BRIEF

- Aiva is an AI composer that creates music for film directors, advertising agencies, and more.
- This brings up the question: Will AI be indistinguishable from the work of a human composer?

ARTIFICIAL INTELLIGENCE AND CREATIVITY

Artificial intelligence (AI) is set to become a key technology of the 21st century. But what about AI? Programs that can **beat you** at tasks with perfection? Or perhaps **auto-replacing your job**?

When we think about AI, we often look at things that will be replaced: high-level computation, manufacturing, etc. Yet, there is now a new wave of emerging AI, one of which happens to be musical composition.

Aiva Technologies is one of the leading AI music composition. It was founded just last year.

AI Painter

See your photo turned into artwork in seconds!

HOME NEWS TECHNOLOGY SPACE PHYSICS HEALTH EARTH HUMANS LIFE TOPICS EVENTS JOBS

DAILY NEWS 29 June 2017

Artificially intelligent painters invent new styles of art



Art for the AI generation
Art and Artificial Intelligence Laboratory, Rutgers University

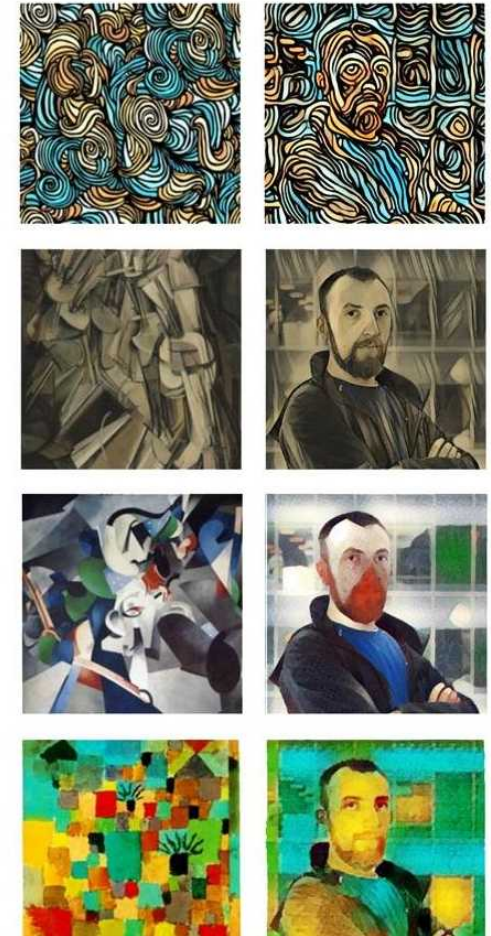
By Chris Baraniuk

Now and then, a painter like Claude Monet or Pablo Picasso comes along and turns the art world on its head. They invent new aesthetic styles, forging movements such as impressionism or abstract expressionism. But could the next

breaking

onal artwork.
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your door too.

ich you can



<https://www.newscientist.com/article/2139184-artificially-intelligent-painters-invent-new-styles-of-art/>
<https://www.instapainting.com/ai-painter>
<https://futurism.com/a-new-ai-can-write-music-as-well-as-a-human-composer/>



git.io/v5zNL
für Code und Presentation