## 321Code!

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





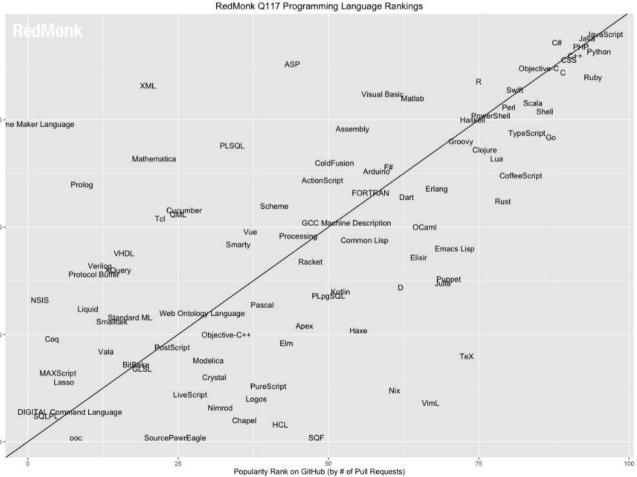
Programmiersprachen



#### Interactive: The Top Progra Languages 2017

Interactive: The Top Programming Language 75 ne Maker Language











## 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

```
>>> # Kontrollstrukturen
>>> # listen
                                     >>> if len(liste) > 3:
>>> liste = [3, 2, 1]
>>> liste[2]
                                             print('Wahr')
                                     ... else:
                                             print('Falsch')
>>> print(liste)
[3, 2, 1]
                                     Wahr
>>> len(liste)
                                     >>> if '3' in tuple:
                                             print('Auch Wahr')
>>> liste append('Code!')
>>> len(liste)
                                     >>> if 3 in tuple:
                                             print('Jetzt aber.')
>>> # Tuple
>>> tuple = (3, 2, 1, 'Code!')
                                     Jetzt aber.
```



# 3 Folien Python 3/3

```
>>> # Schleifen
>>> for i in liste:
        print(i)
3
Code!
>>> a = 5
>>> while a >= 0:
        print(a)
       a = a - 1
3
0
```





Coding Session



## 3 Folien Python 4/3

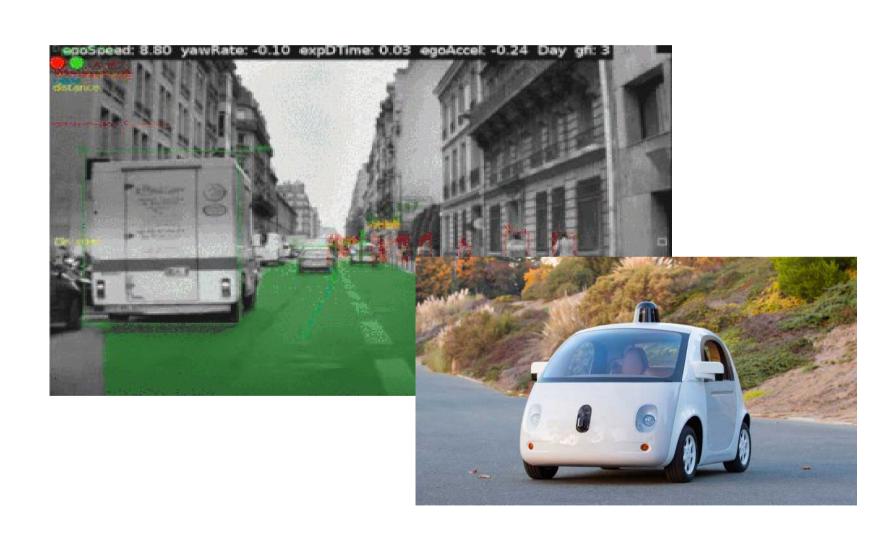


```
# Python
https://py-tutorial-de.readthedocs.io/de/python-3.3/
https://docs.python.org/3/tutorial/

# OpenCV
http://docs.opencv.org/3.3.0/d6/d00/tutorial_py_root.html
http://docs.opencv.org/3.3.0/
[EN]
```



## Autonome Autos





## 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 Gruļ 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.

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

Danielle Muoio, Business Insider ⊙ 20.06.2017, 15:07 ▲ 619











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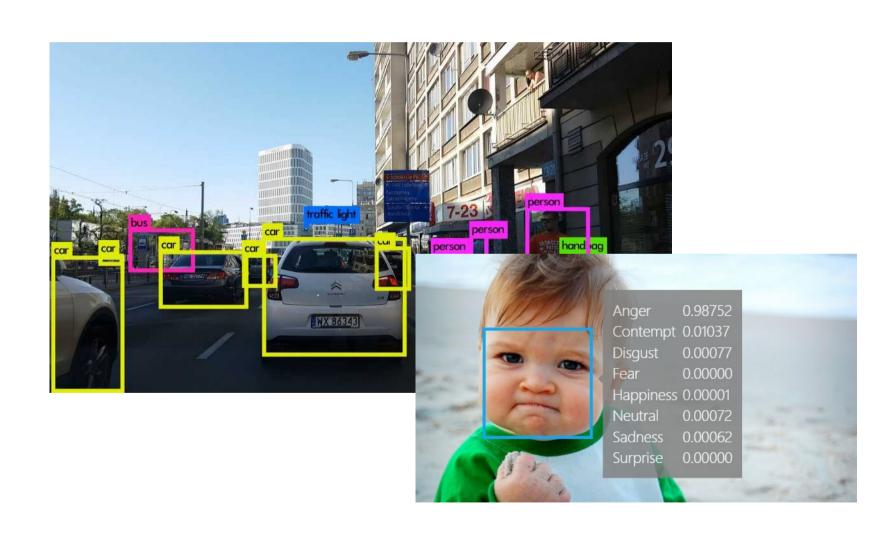
Daimler, the parent company of Mercedes, tests its autonomous big-rig on a highway. Daimler

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 Schizophr Research

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

Categorized: Artificial Intelligence | Machine Learning

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In the U.S. about 20 percent of adults suffer from a mental health receive no treatment. While early identification, diagnosis, and tre schizophrenia, there is no medical testing that can provide an ab

Earlier this year, IBM scientists collaborated with researchers at t for Advanced Studies (CAS) to publish new research regarding tl predict instances of schizophrenia with a 74 percent accuracy. The the severity of specific symptoms in schizophrenia patients - son machine learning, 'computational psychiatry' can be used to help - patients with schizophrenia.

Computational psychiatry provides physicians with tools that ena approaches had been subjective up until that point. In this schizo Artificial Intelligence Is Helping Doctors Find Breast Cancer Risk 30 Time











lanet Burns. O CONTRIBUTOR

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sudanese radiologist Dr Hania Fadi 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



## In Creativity?

Artificial Intelligence

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

#### Al Painter

IN BRIEF

replacing your job?

See your photo turned into artwork in seconds!

- · Aiva is an AI composer that create film directors, advertising agencie
- . This brings up the question: Will A indistinguishable from the work o

ARTIFICIAL INTELLIGENCE AND CR

Artificial intelligence (AI) is set to become technology of the 21st century. But wha about AI? Programs that can beat you tasks with perfection? Or perhaps auto

When we think about AI, we often look replaced: high-level computation, mar Yet, there is now a new wave of emerg one of which happens to be musical co

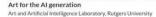
Aiva Technologies is one of the leading composition. It was founded just last y HOME NEWS TECHNOLOGY SPACE PHYSICS HEALTH EARTH HUMANS LIFE TOPICS EVENTS JOBS

DAILY NEWS 29 June 2017

**Artificially intelligent painters** 

# invent new styles of art





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

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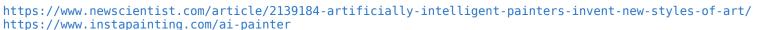












https://futurism.com/a-new-ai-can-write-music-as-well-as-a-human-composer/



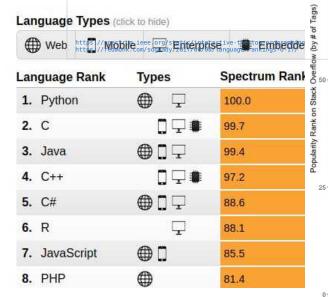
# $\underset{\text{für Code und Presentation}}{\text{git.io/v5}} z NL$





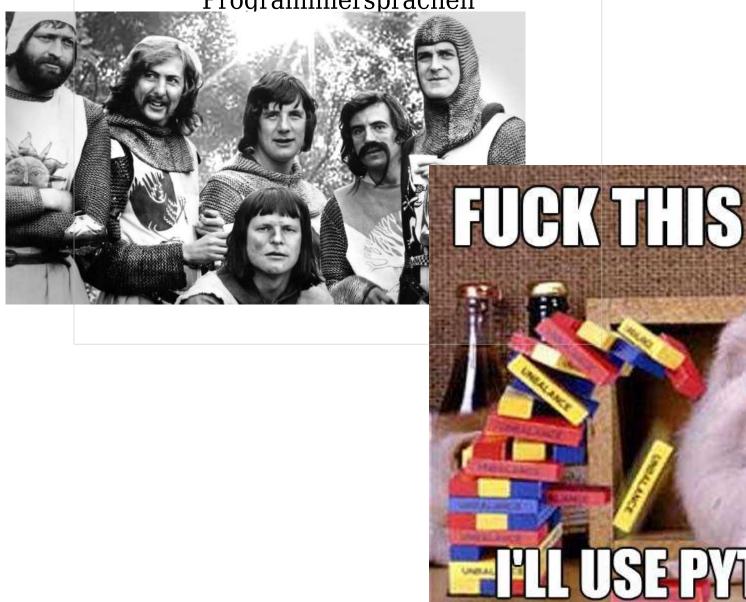
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Programmiersprachen





### 3 Folien Python 0/3

```
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Type "help", "copyright", "credits" or "license" for more information.
>>>
```

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#### 3 Folien Python 1/3

```
>>> add(2, 3)
>>> # Variablen
>>> print(fünf)
```

```
>>> # Zeichenketten (Strings)
                      >>> titel = '321Code!'
                      >>> titel.lower()
'321code!'
                      >>> titel.upper()
                       '321C0DE!'
>>> titel * 2
                       '321Code!321Code!'
```



#### 3 Folien Python 2/3

```
>>> # Listen
                              >>> # Kontrollstrukturen
>>> liste = [3, 2, 1]
                              >>> if len(liste) > 3:
>>> liste[2]
                              ... print('Wahr')
                              ... else:
>>> print(liste)
                             ... print('Falsch')
[3, 2, 1]
>>> len(liste)
                              Wahr
                              >>> if '3' in tuple:
                            ... print('Auch Wahr')
>>> liste.append('Code!')
>>> len(liste)
                              ...
                              >>> if 3 in tuple:
                              ... print('Jetzt aber.')
>>> # Tuple
>>> tuple = (3, 2, 1, 'Code!')
                              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
```





#### 3 Folien Python 4/3



al-de.readthedocs.io/de/python-3.3/ [DE] on.org/3/tutorial/ [EN]

v.org/3.3.0/d6/d00/tutorial\_py\_root.html [EN] v.org/3.3.0/ [EN]



#### Autonome Autos











O Video ∨ \(\theta\) Popular ∨ \(\alpha\) Sub DEUTSCHLAND

#### 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

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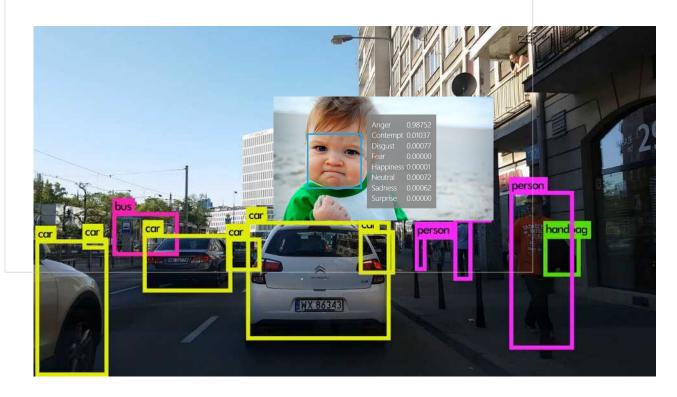
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## Artificial Intelligence



#### In Medizin?

## w AI and Machine Learning

e Aiding Schizophr esearch

Artificial Intelligence Is Helping





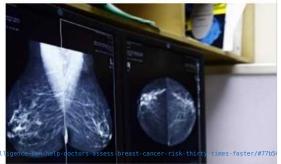
, 2017 | Written by: Dr. Guillermo Cecchi

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J. S. rabout 20 percent of adults, suffer from a mental health earth https://www.forbs.com/sites/jagetyburns/2016/08/29/artificial-intel no treatment. While early identification, diagnosis, and tre



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