



Machine Learning Best



Learn Machine Learning from Top 50 Articles for the Past Year (v.2019)



Mybridge

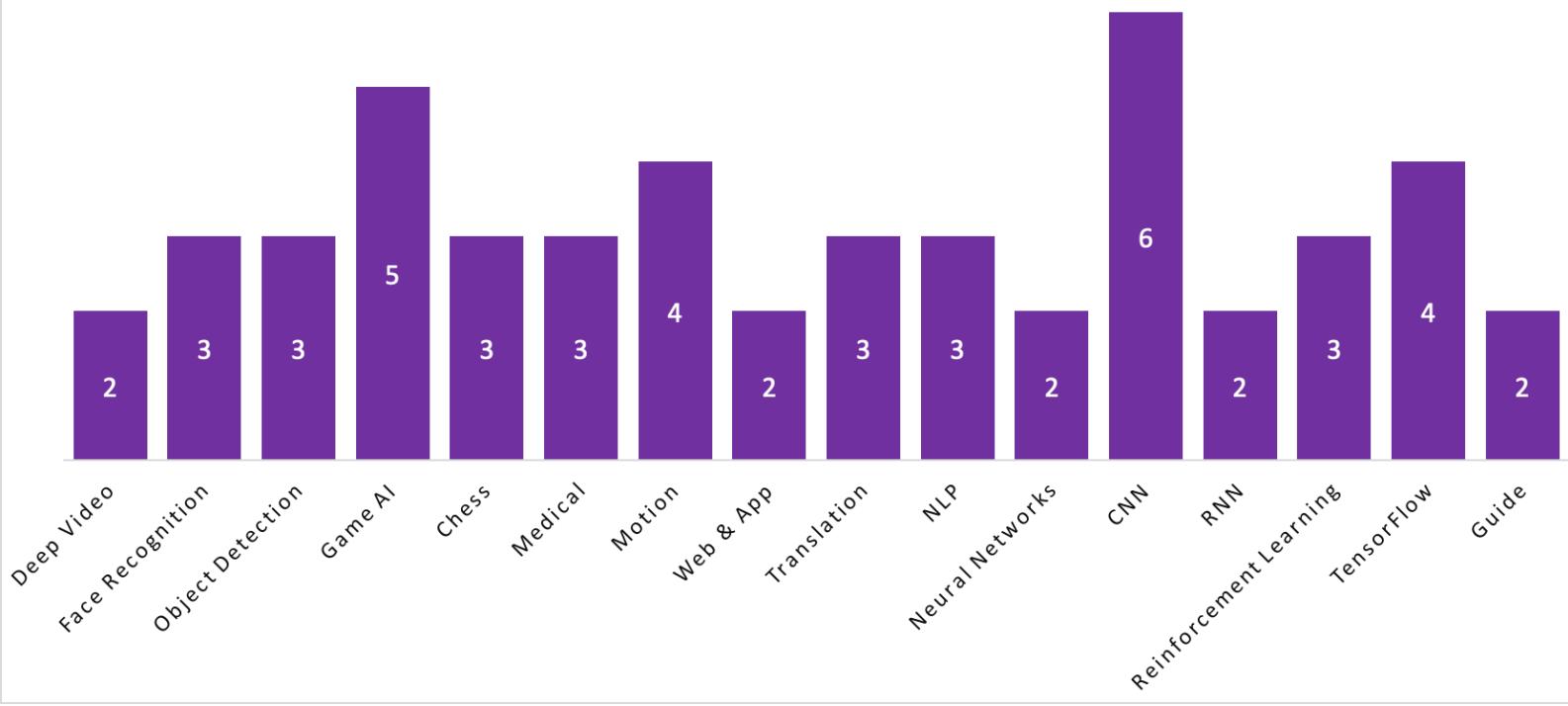
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Dec 29, 2018 · 8 min read

Between Jan~Dec 2018, we've compared nearly 22,000 Machine Learning articles to pick the Top 50 that can improve your data science skill for 2019.

This is an extremely competitive list (50/22,000 or 0.23% chance), and carefully picks the most useful Machine Learning articles published for the past year. [Mybridge AI](#) evaluates the quality by considering popularity, engagement and recency, and other human factors.

Tutorials are divided into 16 relevant groups (see below).

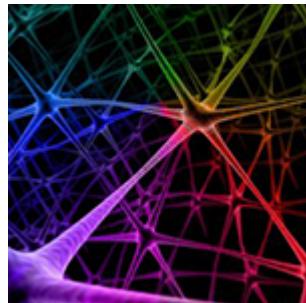


Give a plenty of time to read top Machine Learning tutorials you may have missed for the past year. To check out, the last year's best Machine Learning Articles, [Click Here](#).



<Recommended Learning>

A) CNN



[Deep Learning: Convolutional Neural Networks in Python](#)

[15,857 recommends, 4.6/5 stars]

B) Beginner



Machine Learning, Data Science and Deep Learning with Python.
TensorFlow & Neural Networks

[79,663 recommends, 4.6/5 stars]



(Click the number below. The numbers are **NOT** ordered by ranking in this post)

<Deep Video>

No 1

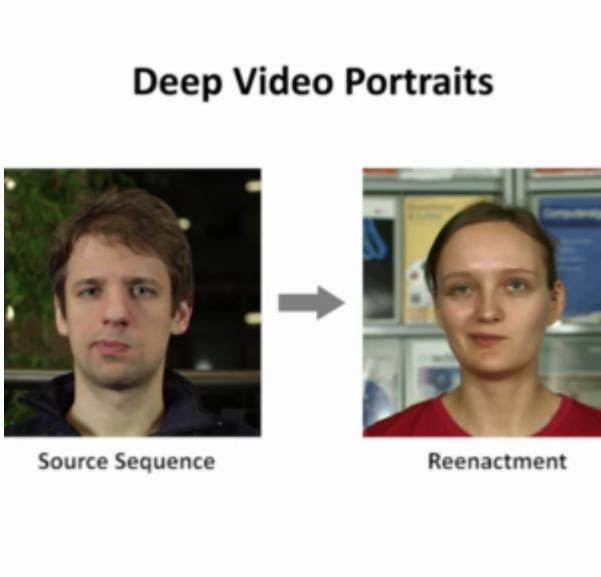
Family fun with deepfakes. Or how I got my wife onto the Tonight Show. Courtesy of [Sven Charleer](#)



... . . .

No 2

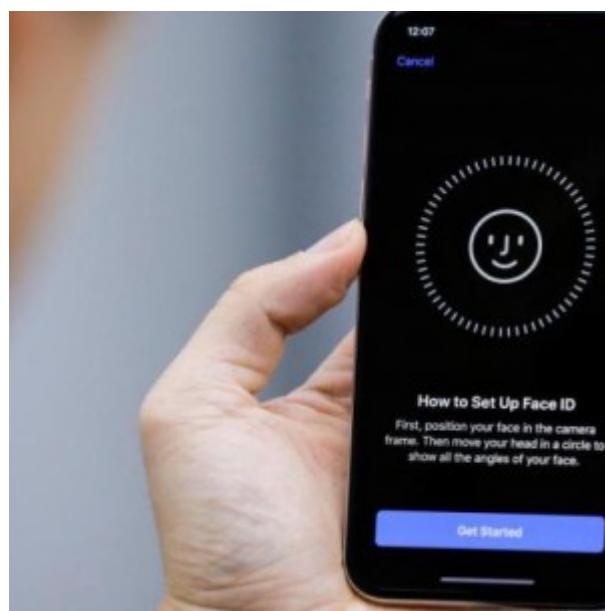
Deep Video Portraits: A novel approach that enables photo-realistic re-animation of portrait videos using only an input video. Courtesy of



<Face Recognition>

No 3

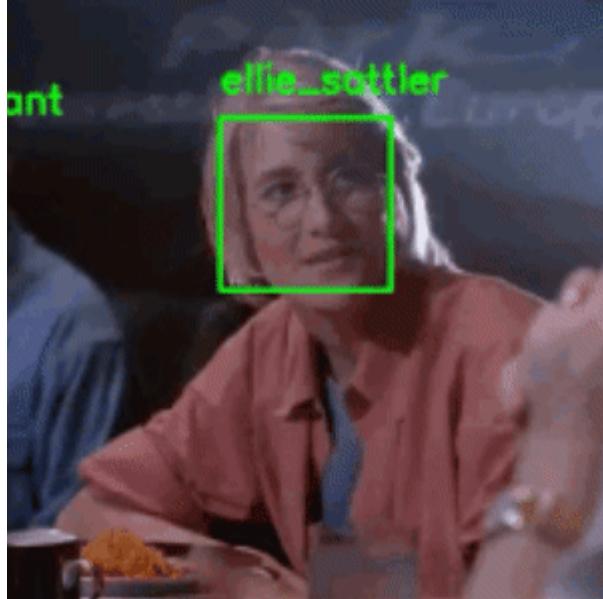
How I implemented iPhone X's FaceID using Deep Learning in Python. Courtesy of [Norman Di Palo](#)



.....[FacelD Open Source]

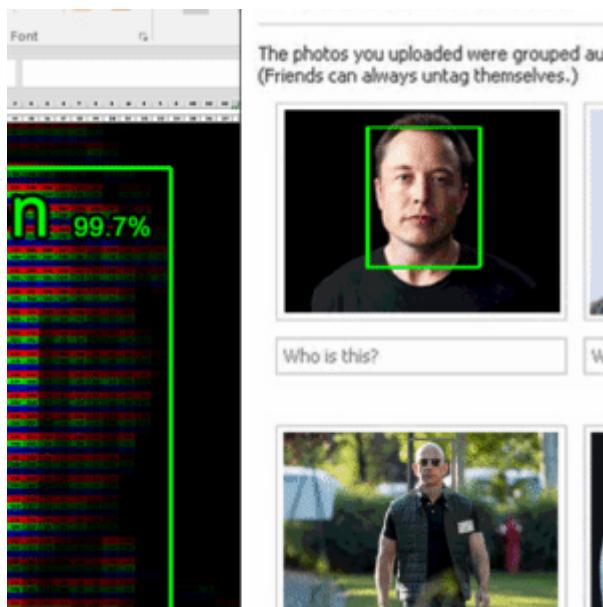
No 4

Face recognition with OpenCV, Python, and deep learning. Courtesy of Adrian Rosebrock



No 5

Cutting-Edge Face Recognition is Complicated. These Spreadsheets Make it Easier. Courtesy of [Dave Smith](#)

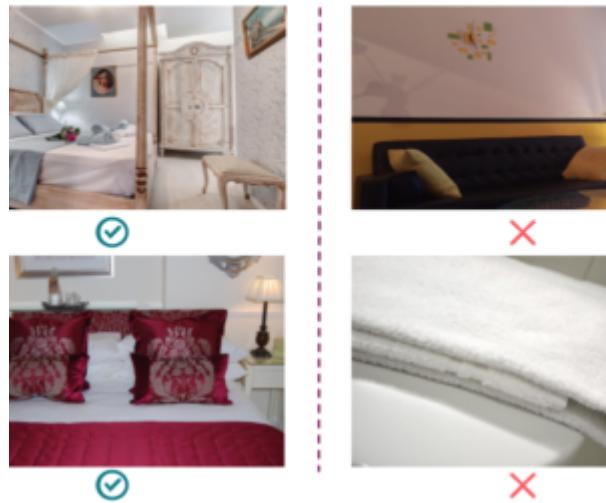


<Object Detection>

No 6

Categorizing Listing Photos at Airbnb: Large-scale deep learning models are changing the way we think about images of homes on our platform. Courtesy of [Shijing Yao](#)

Bedroom Or Not?



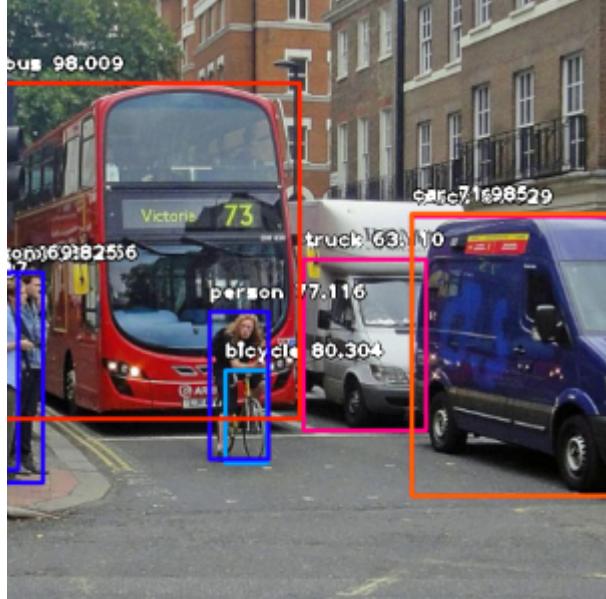
No 7

YOLO object detection with OpenCV. Courtesy of Adrian Rosebrock



No 8

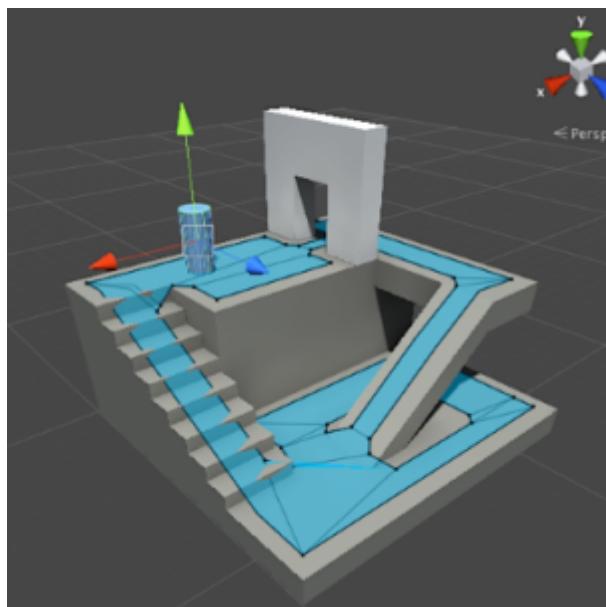
Object Detection with 10 lines of code. Courtesy of Moses Olafenwa



<Game AI>

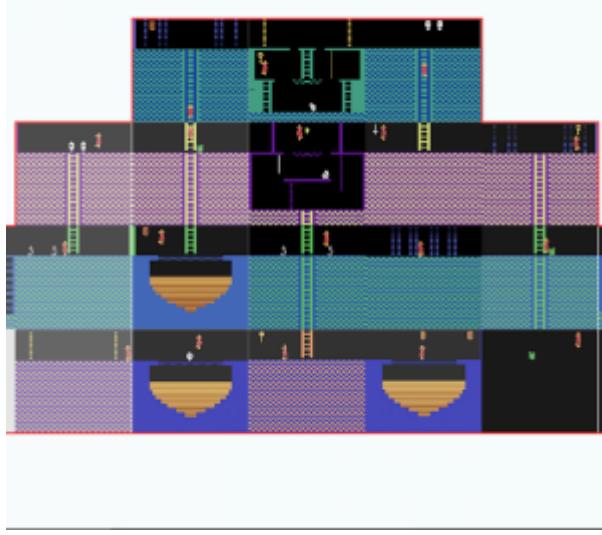
No 9

The Total Beginner's Guide to Game AI. Courtesy of Kylotan



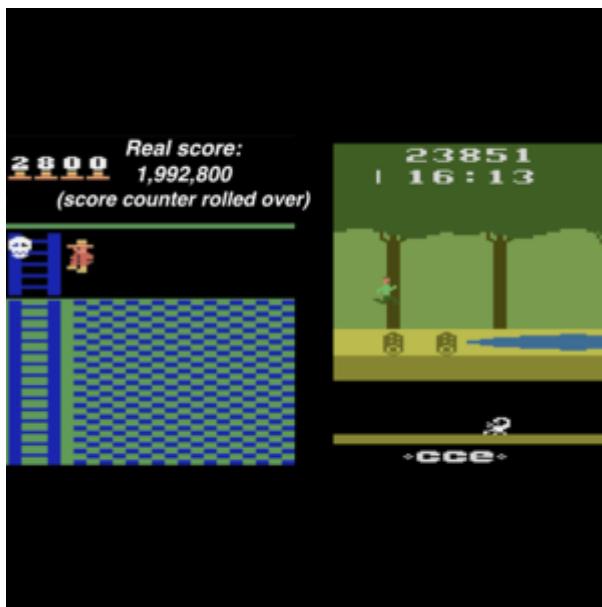
No 10

Reinforcement Learning with Prediction-Based Rewards. Courtesy of Yura Burda, Harri Edwards



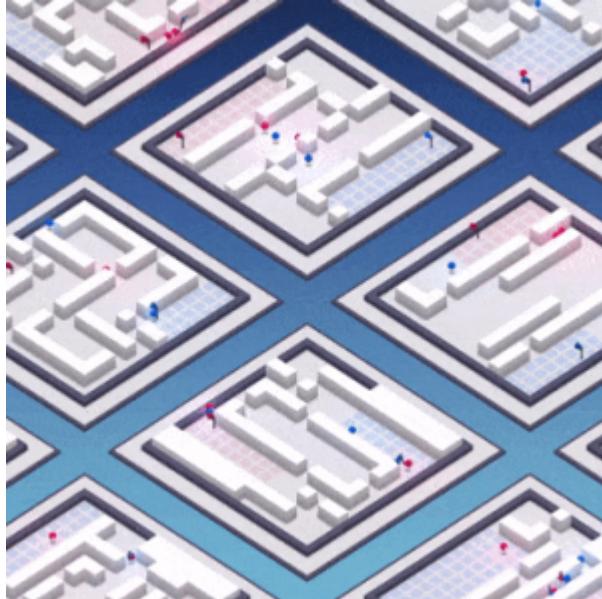
No 11

Montezuma's Revenge Solved by Go-Explore, a New Algorithm for Hard-exploration Problems (Sets Records on Pitfall too) Courtesy of [Uber Engineering](#)



No 12

Capture the Flag: How agents achieve human-level performance in a complex first-person multiplayer game, and can even collaborate with human teammates. Courtesy of DeepMind



No 13

OpenAI Five: Defeating amateur human players at Dota 2. Courtesy of OpenAI



<Chess>

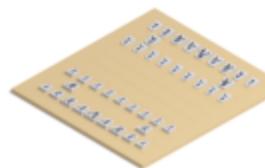
No 14

AlphaZero: Shedding new light on the grand games of chess, shogi and Go. Courtesy of DeepMind

Chess



Shogi



AlphaZero vs. Stockfish

W:29.0% D:70.6% L:0.4%

W:2.0% D:97.2% L:0.8%

AlphaZero vs. Elmo

W:84.2% D:2.2% L:13.

W:98.2% D:0.0% L:1.

No 15

How to build your own AlphaZero AI using Python and Keras. Courtesy of [David Foster](#)

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5 *****
*****
100000000100000001000000100001101001000000000110000001000001000011010
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+ U...40

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+ U...34

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+ U...22
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No 16

Explained Simply: How an AI program mastered the ancient game of Go. Courtesy of [Aman Agarwal](#)



<Medical>

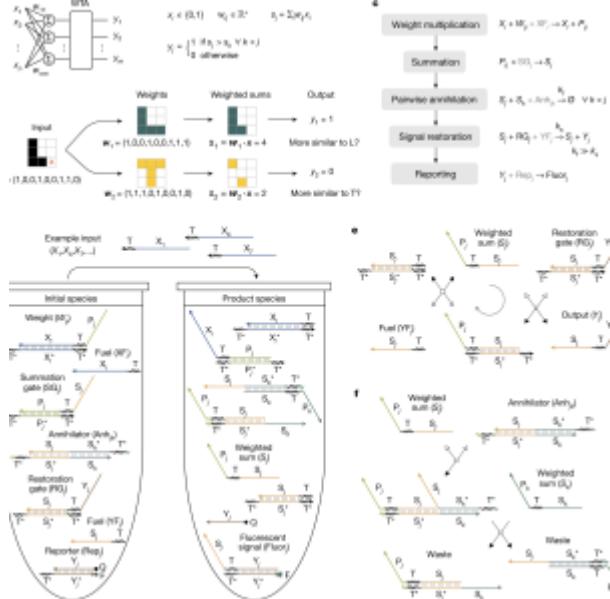
No 17

The unreasonable usefulness of deep learning in medical image datasets.



No 18

Scaling up molecular pattern recognition with DNA-based winner-take-all neural networks. Courtesy of Kevin M. Cherry, Lulu Qian



No 19

It's a no-brainer! Deep learning for brain MR images.

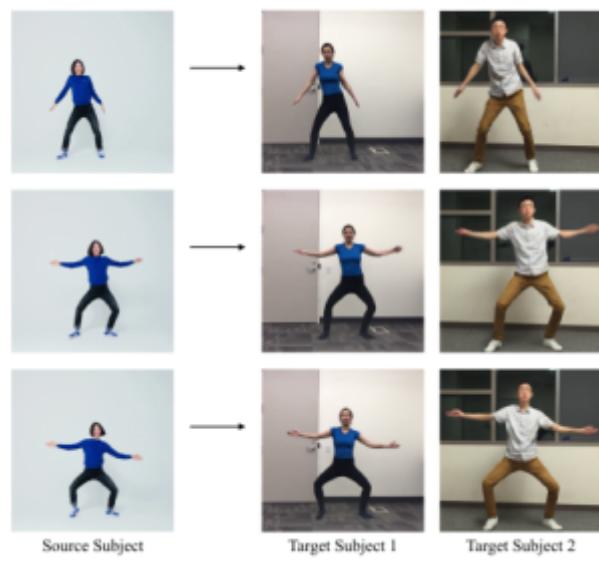


"I have the MRI scan of your brain. The right hemisphere is clogged with computer passwords."

<Motion>

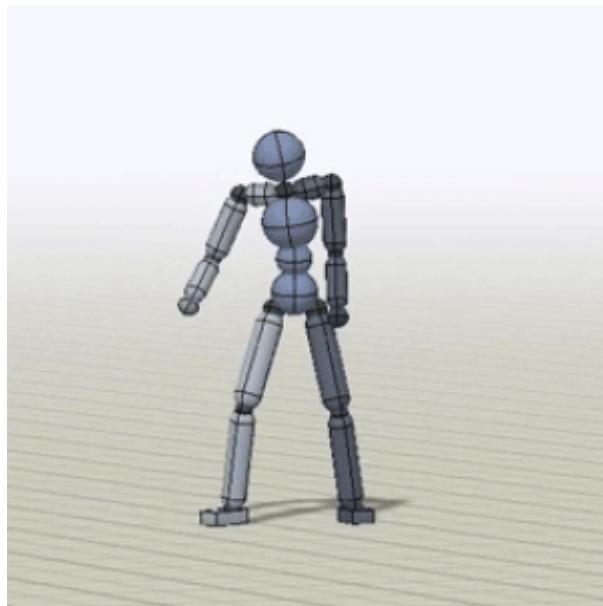
No 20

Everybody Dance Now: A simple method for “do as I do” motion transfer. Courtesy of Caroline Chan, Shiry Ginosar, Tinghui Zhou, Alexei A. Efros



No 21

Towards a Virtual Stuntman. Courtesy of Xue Bin (Jason) Peng



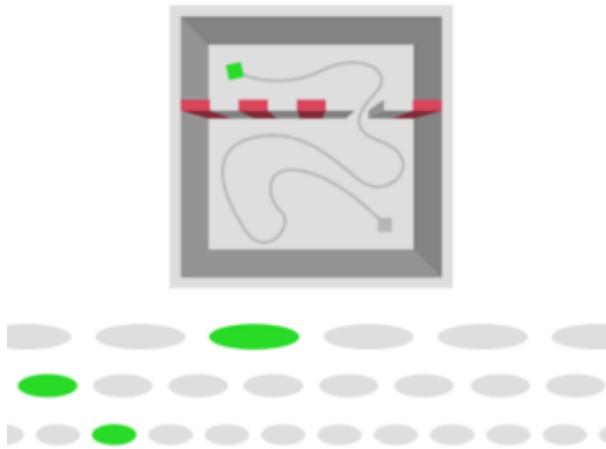
No 22

Learning Dexterity: A real robot hand, trained with same learning algorithm and code as OpenAI Five, has learned human-like motions to rotate objects. Courtesy of OpenAI



No 23

Navigating with grid-like representations in artificial agents. Courtesy of Andrea Banino, Dharshan Kumaran, Caswell Barry



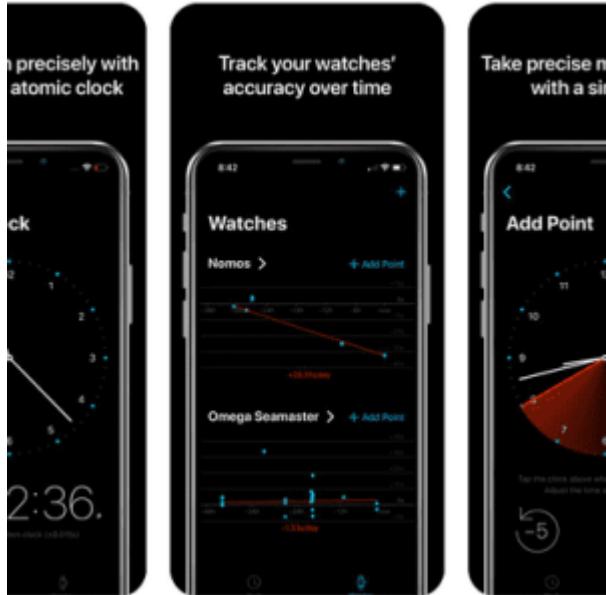
.....[News]

.....

<Web & App>

No 24

How I Shipped a Neural Network on iOS with CoreML, PyTorch, and React Native—Stefano J. Attardi. Courtesy of [Stefano J. Attardi](#)



No 25

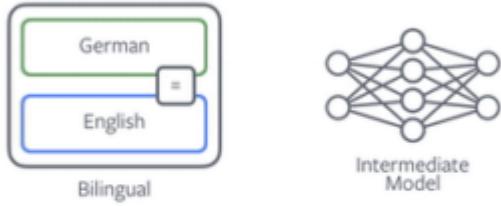
How you can train an AI to convert your design mockups into HTML and CSS. Courtesy of Emil Wallner



<Translation>

No 26

Scaling neural machine translation to bigger data sets with faster training and inference—Facebook Code. Courtesy of Michael Auli, Myle Ott, Sergey Edunov



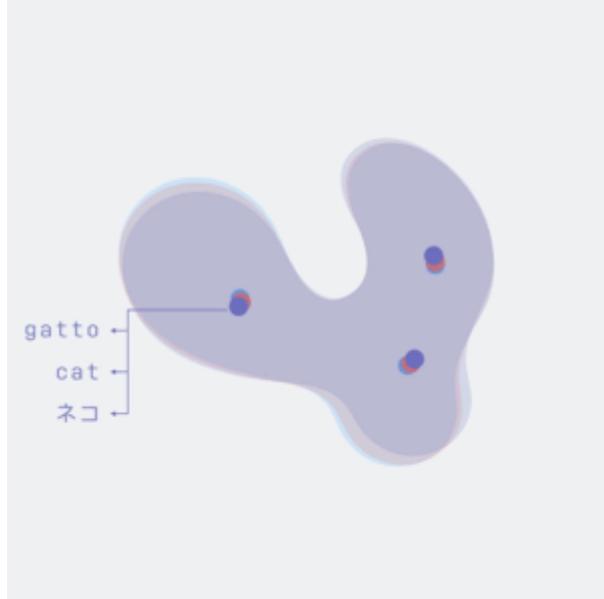
No 27

Found in translation: Building a language translator from scratch with deep learning. Courtesy of [Samuel Lynn-Evans](#)



No 28

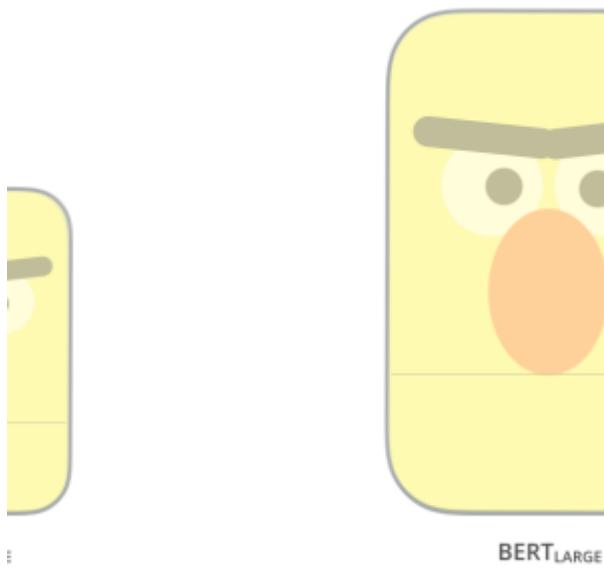
Unsupervised machine translation: A novel approach to provide fast, accurate translations for more languages. Courtesy of [Facebook Research](#)



<NLP>

No 29

The Illustrated BERT, ELMo, and co. (How NLP Cracked Transfer Learning) Courtesy of [Jay Alammar](#)



No 30

The Annotated Transformer—Harvard NLP.

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Abstract

The dominant sequence transduction models are based on complex recurrent or convolutional neural networks that include an encoder and a decoder. The best performing models also connect the encoder and decoder through an attention mechanism. We propose a new simple network architecture, the Transformer, based solely on attention mechanisms, dispensing with recurrence and convolutions entirely. Experiments on two machine translation tasks show these models to be superior in quality while being more parallelizable and requiring significantly less time to train. Our model achieves 28.4 BLEU on the WMT 2014 English-to-German translation task, improving over the existing best results, including ensembles, by over 2 BLEU. On the WMT 2014 English-to-French translation task, our model establishes a new single-model state-of-the-art BLEU score of 41.8 after training for 3.5 days on eight GPUs, a small fraction of the training costs of the best models from the literature. We show that the Transformer generalizes well to other tasks by applying it successfully to English constituency parsing both with

No 31

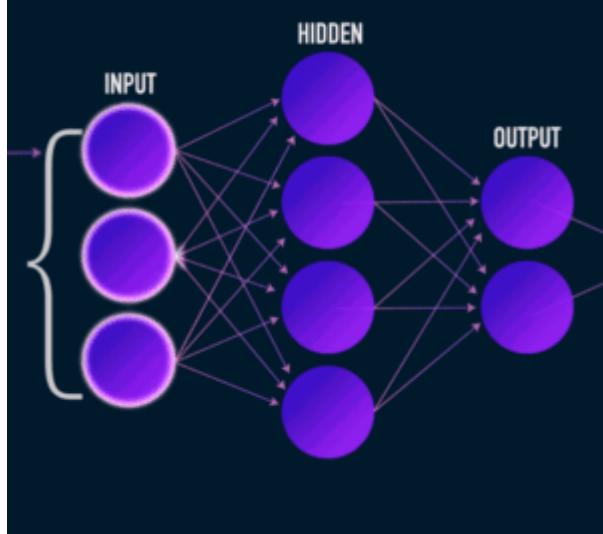
Natural Language Processing is Fun! Courtesy of [Adam Geitgey](#)

don is the capital and most populous
ngland and the United Kingdom. Star
he River Thames in the south east of
id of Great Britain, London has been
or settlement for two millennia. It was
ided by the Romans, who named
ndinium. London's ancient core, the
ondon, largely retains its 1.12-square-
(km²) medieval boundaries.

<Neural Networks>

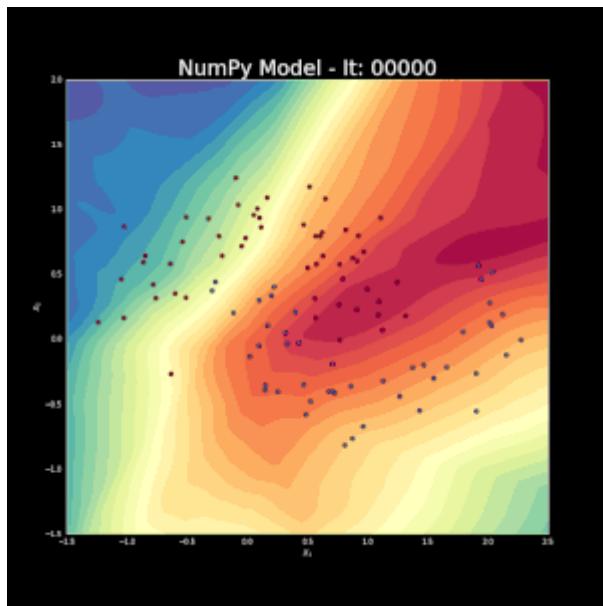
No 32

How to build your own Neural Network from scratch in Python.
Courtesy of [James Loy](#)



No 33

Let's code a Neural Network in plain NumPy.



<CNN>

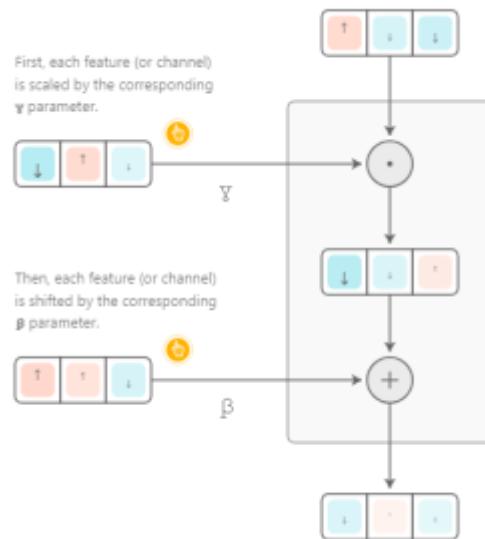
No 34

Differentiable Image Parameterizations: A powerful, under-explored tool for neural network visualizations and art.. Courtesy of distillpub



No 35

Feature-wise transformations. Courtesy of distillpub



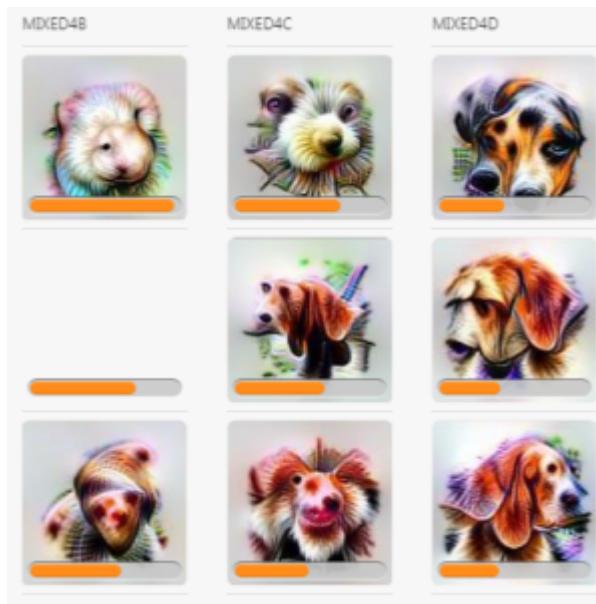
No 36

Keras and Convolutional Neural Networks (CNNs). Courtesy of Adrian Rosebrock



No 37

The Building Blocks of Interpretability. Courtesy of Distill



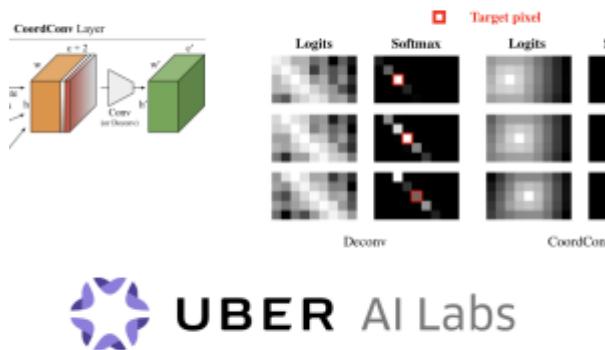
No 38

Rosetta: Understanding text in images and videos with machine learning—Facebook Code. Courtesy of [Facebook Research](#)



No 39

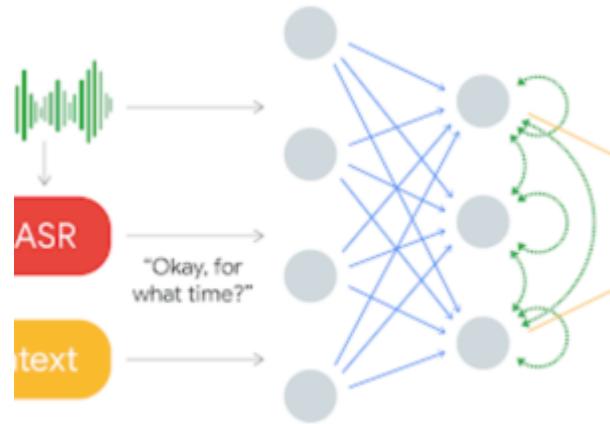
An Intriguing Failing of Convolutional Neural Networks and the CoordConv Solution. Courtesy of [Uber](#)



<RNN>

No 40

Google Duplex: An AI System for Accomplishing Real World Tasks Over the Phone. Courtesy of Yaniv Leviathan



No 41

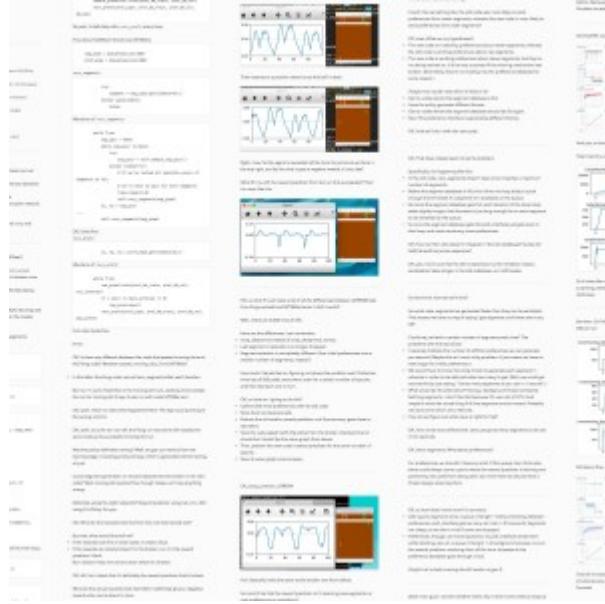
World Models: Can agents learn inside of their own dreams?. Courtesy of [hard maru](#)



<Reinforcement Learning>

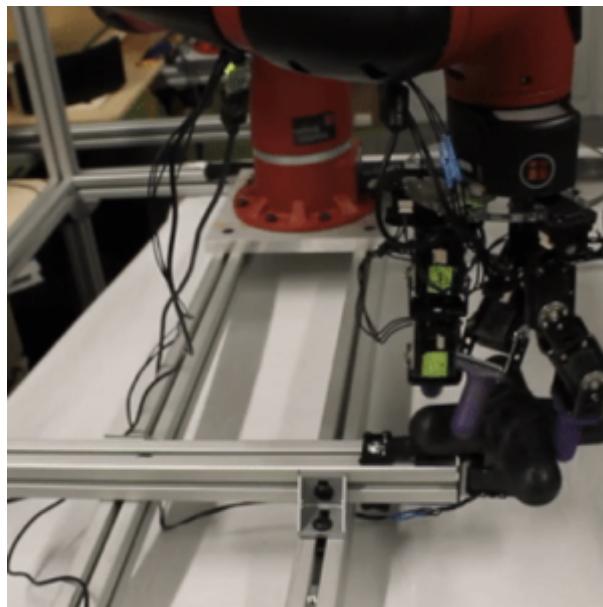
No 42

Lessons Learned Reproducing a Deep Reinforcement Learning Paper.
Courtesy of [Matthew Rahtz](#)



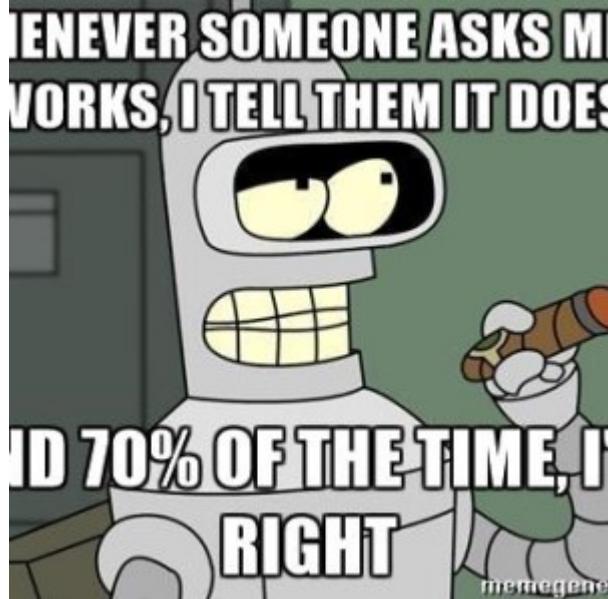
No 43

Dexterous Manipulation with Reinforcement Learning: Efficient, General, and Low-Cost. Courtesy of *Henry Zhu, Abhishek Gupta, Vikash Kumar, Aravind Rajeswaran, and Sergey Levine*



No 44

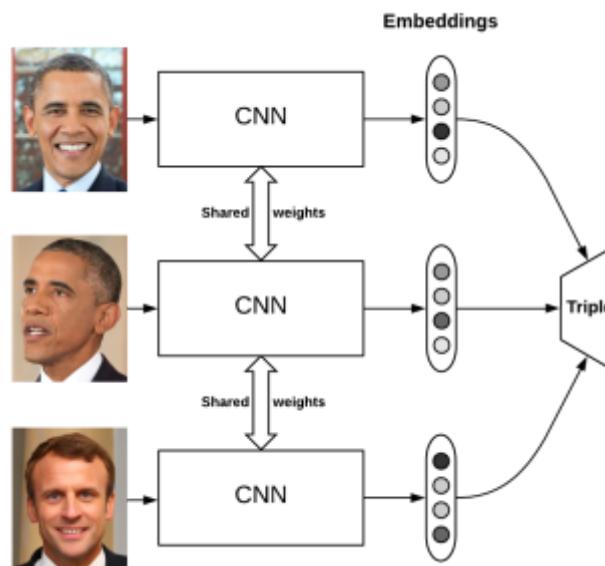
Deep Reinforcement Learning Doesn't Work Yet.



<TensorFlow>

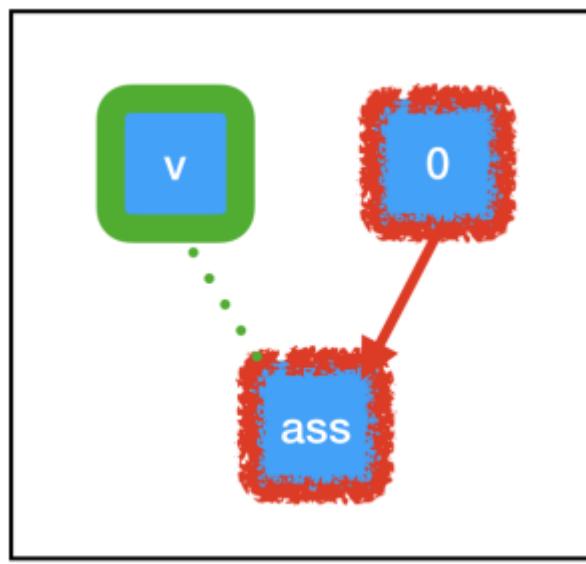
No 45

Triplet Loss and Online Triplet Mining in TensorFlow. Courtesy of [Olivier Moindrot](#)



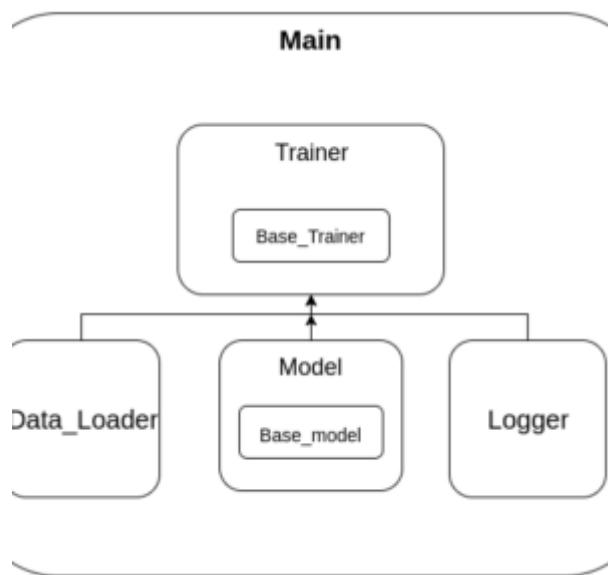
No 46

Tensorflow: The Confusing Parts (1) . Courtesy of Jacob Buckman



No 47

Tensorflow-Project-Template: A best practice for tensorflow project template architecture. [2579 stars on Github].



No 48

Real-time Human Pose Estimation in the Browser with TensorFlow.js.
Courtesy of [TensorFlow](#)



<Guide>

No 49

Rules of Machine Learning: | ML Universal Guides | Google Developers. Courtesy of Martin Zinkevich



No 50

Model-based machine learning. Courtesy of John Winn and Christopher M. Bishop



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