

Artificial Intelligence on AWS

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- **Artificial Intelligence**: design software applications which exhibit human-like behavior, e.g. speech, natural language processing, reasoning or intuition
- **Machine Learning**: teach machines to learn without being explicitly programmed
- **Deep Learning**: using neural networks, teach machines to learn from data where features cannot be explicitly expressed

Artificial Intelligence At Amazon

Thousands Of Employees Across The Company Focused
on AI



Discovery
&
Search



Fulfilment
&
Logistics



Enhance
Existing
Products



Define New
Categories
Of
Products



Bring
Machine
Learning To
All

Jeff Bezos' letter to Amazon shareholders

*"We are **solving problems** with **machine learning** and **artificial intelligence** that were in the realm of science fiction for the last several decades. Natural **language** understanding, machine **vision** problems, it really is an amazing renaissance.*

<https://www.geekwire.com/2017/jeff-bezos-explains-amazons-artificial-intelligence-machine-learning-strategy/>

APR 18, 2017 @ 11:26 AM

The Great AI Recruitment War: Amazon Is On Top, And Apple Is Almost Nowhere To Be Seen

https://www.forbes.com/sites/aarontilley/2017/04/18/the-great-ai-recruitment-war-amazon-is-on-top-and-apple-is-almost-nowhere-to-be-seen



25,000 skills

amazon echo





INTRODUCING
amazon go



amazon
PrimeAir

amazon
PrimeAir

Selected customers running AI on AWS



NETFLIX

Stanford



The Washington Post



Carnegie Mellon

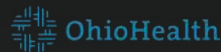
Pinterest



C-SPAN



real networks



GoAnimate



圖森 tu Simple

duolingo

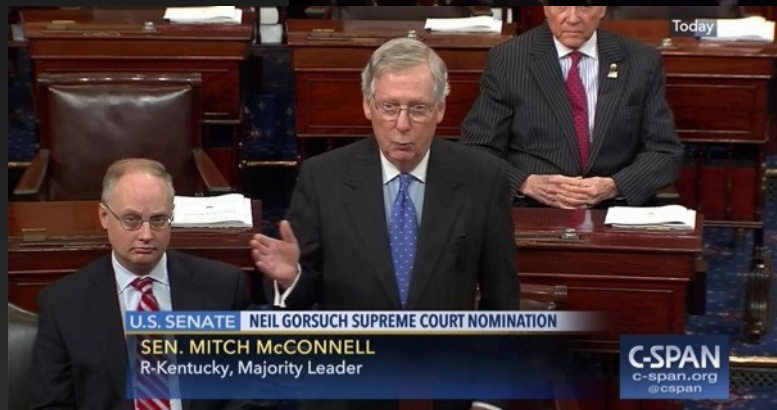
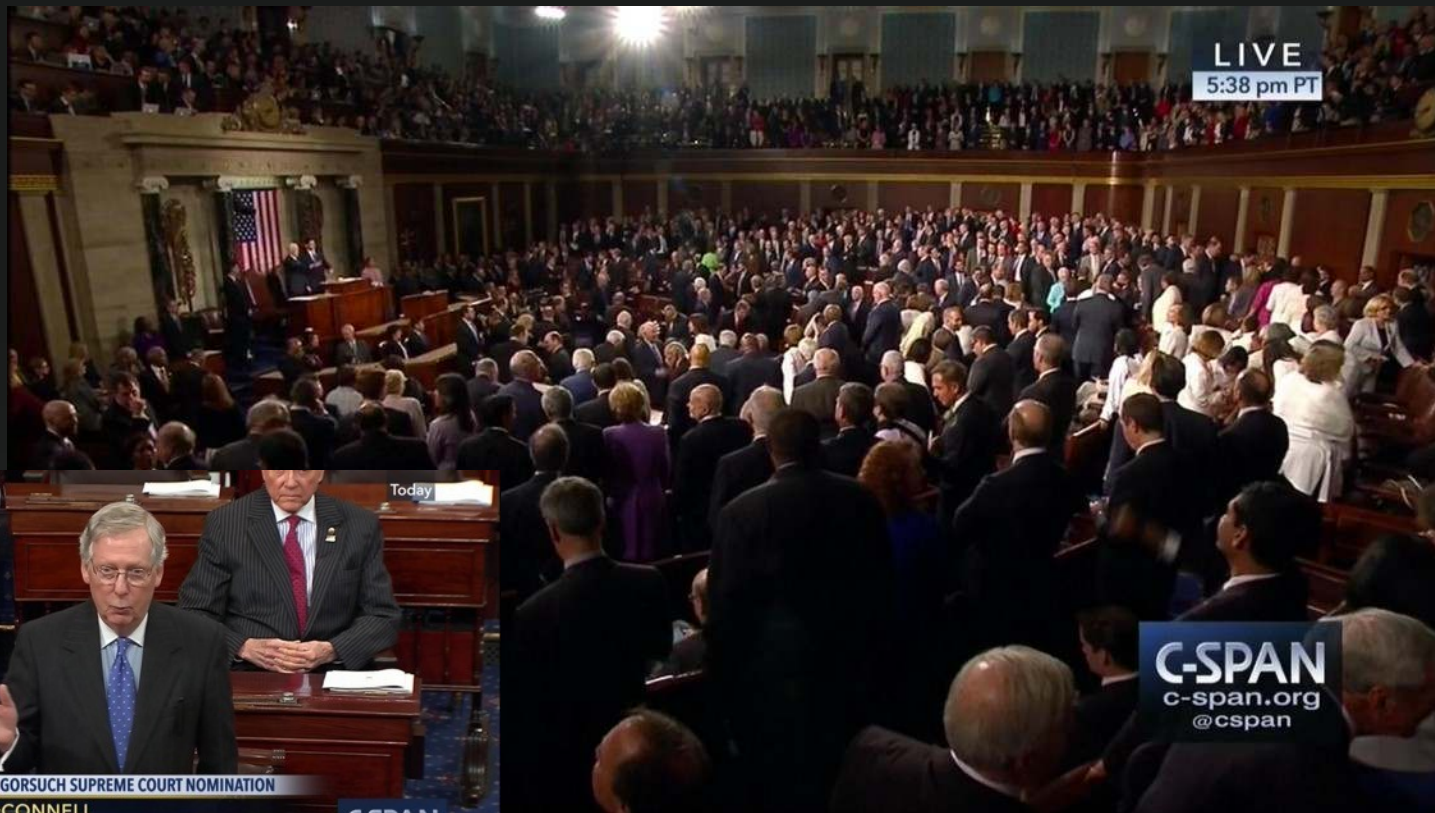


zmags

Amazon AI: Artificial Intelligence In The Hands Of Every Developer

Services	Chat Amazon Lex		Speech Amazon Polly		Vision Amazon Rekognition	
Platforms	Amazon ML	Spark & EMR	Kinesis	Batch	EC S	
Engines	MXNet	TensorFlow	Caffe	Theano	Pytorch	CNTK
Infrastructure	CPU	GPU	FPGA	IoT	Mobile	

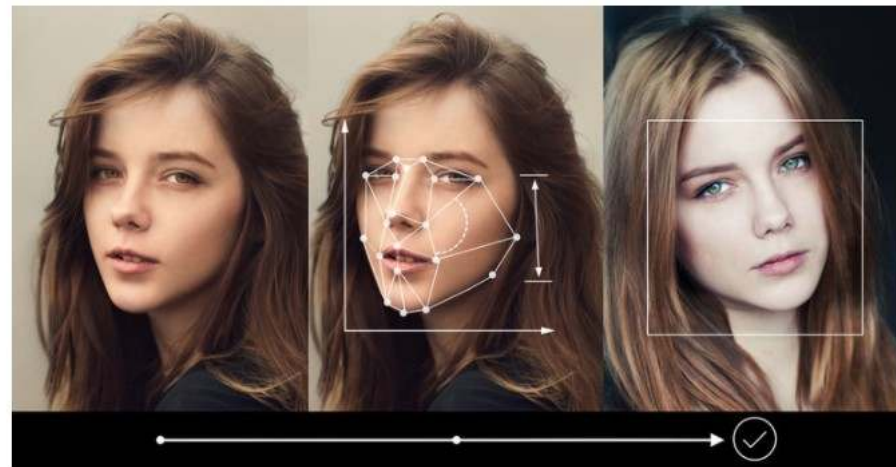
C-SPAN



October 19, 2017

Amazon Rekognition Helps Marinus Analytics Fight Human Trafficking

Marinus Analytics provides law enforcement with tools, founded in artificial intelligence, to turn big data into actionable intelligence. The Marinus flagship software, Traffic Jam, is a suite of tools for use by law enforcement agencies on sex trafficking investigations.





- Expedia have over **10M** images from **300,000** hotels
- Using great images boosts **conversion**
- Using Keras and EC2 GPU instances, they **fine-tuned** a pre-trained Convolutional Neural Network using **100,000** images
- Hotel descriptions now **automatically** feature available images

Some images are really good

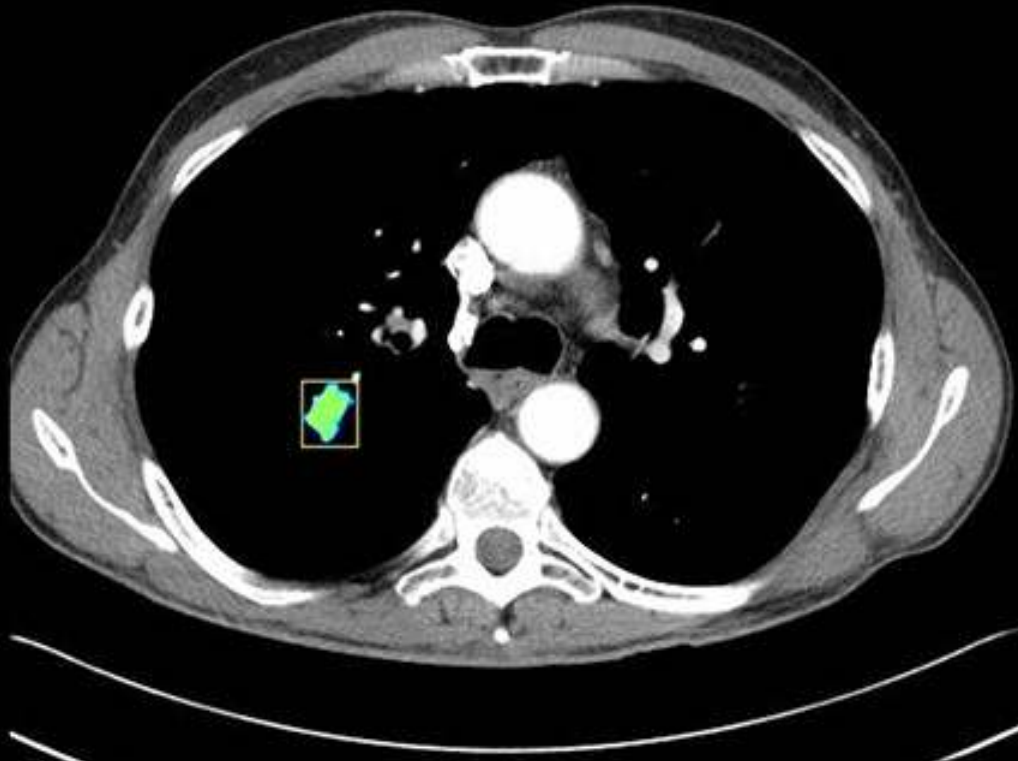


Others not so much



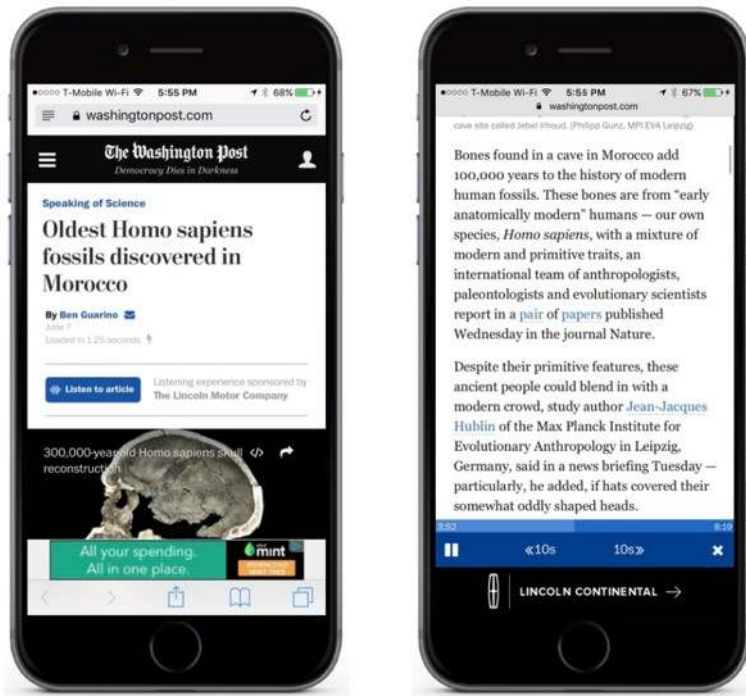


MATRIX
ANALYTICS



The Washington Post to start experimenting with audio articles using Amazon Polly

By WashPostPR June 9



<https://www.washingtonpost.com/pr/wp/2017/06/09/the-washington-post-to-start-experimenting-with-audio-articles-using-amazon-polly/>

A photograph of the interior of a BMW car, showing the steering wheel with the BMW logo, the dashboard with a digital display, and the rearview mirror. A text overlay is present in the upper center of the image.

As soon as 2018, Alexa will be your companion in
BMW's

图森 **tu** Simple



Last June, tuSimple drove an autonomous truck

for 200 miles from Yuma, AZ to San Diego,

<https://www.oreilly.com/ideas/self-driving-trucks-enter-the-fast-lane-using-deep-learning>

AWS re:Invent

NOVEMBER 27 – DECEMBER 1, 2017

LAS VEGAS, NEVADA

<http://reinvent.aws.events.com>

Resources

<https://aws.amazon.com/ai/>

<https://aws.amazon.com/blogs/ai/>

<https://mxnet.incubator.apache.org/>

<https://medium.com/@julsimon/>

Thank you!

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<https://aws.amazon.com/evangelists/julien-simon>