Facebook's Facial Recognition 'Approaching Human-Level Performance'

New computer program first to recognize sketches more accurately than a human

A Computer Can Recognize Emotions Better Than Most People

Microsoft, Google Beat Humans at Image Recognition

Deep Learning Machine Beats Humans in IQ Test
People and pose recognition
BMVC 2012, SigProc 2015

Scene classification
CVPR 2014, WACV 2015

Fine-grain recognition
CVPR 2012, CVPRW 2014, WACV 2014
3D reconstruction in large-scale photo collections

CVPR 2011, CACM 2012, PAMI 2013, NDSS 2013

Large-scale image recognition and clustering

Visual geolocation
Wearable cameras: the next big step in photography?

- GoPro
- Narrative
- Indiana Daily Student
- Google
- Microsoft
Egocentric camera privacy

Egocentric recognition & tracking
CVPR-W 2014, ICCV 2015, ICMI 2015

Egocentric image organization and description
NDSS 2014, ECCV 2016
i am typing on my laptop computer

i am shopping at a store

i am eating a plate of food with a salad and sandwich

a teddy bear is sitting on a table next to a tree and a car

a spoon and big blue bowl of fruit sitting on a table with a laptop in the background

a man is holding a cat in his mouth
Technical themes

• Large-scale, noisy, multi-modal data
• Probabilistic graphical models
• Machine learning – deep learning!
• Data mining
• Large-scale computing with MPI, Hadoop, GPUs
• Interdisciplinary applications & collaborations
THANK YOU

For more information:

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