



## **K4**

Keynote

Thursday, May 3rd, 2018

8:30 AM

# **The Next Big Thing: Testing AI and Machine Learning Applications**

Presented by:

**Angie Jones**

Twitter

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# Angie Jones

## Twitter

A senior automation engineer at Twitter, Angie Jones has developed automation strategies and frameworks for countless software products. As a master inventor, she is known for her innovative and out-of-the-box thinking style which has resulted in more than twenty patented inventions in the United States and China. A strong advocate for diversity in technology, Angie shares her wealth of knowledge by speaking and teaching at software conferences worldwide and leading tech workshops for young girls through Black Girls Code. Angie blogs about automation techniques and can be found on Twitter.

# The Reality of Testing in an Artificial World

Angie Jones

<http://angiejones.tech>

@techgirl1908



Senior Automation Engineer  
Twitter, San Francisco, CA, USA



# How would you test this?



@techgirl1908

# The future of testing...



Machine learning won't necessarily eliminate testing jobs, but it will change how the work gets done.

~Paul Merrill



We believe that the most important solution to overcome increasing testing challenges will be the emerging introduction of machine-based intelligence.

~2016-17 World Quality Report



@techgirl1908



We'll see a trend where humans will have less and less mechanical dirty work to do with implementing, executing, and analyzing test results...



...but they will still be  
an integral and  
necessary part of the  
test process to approve  
and act on the findings.

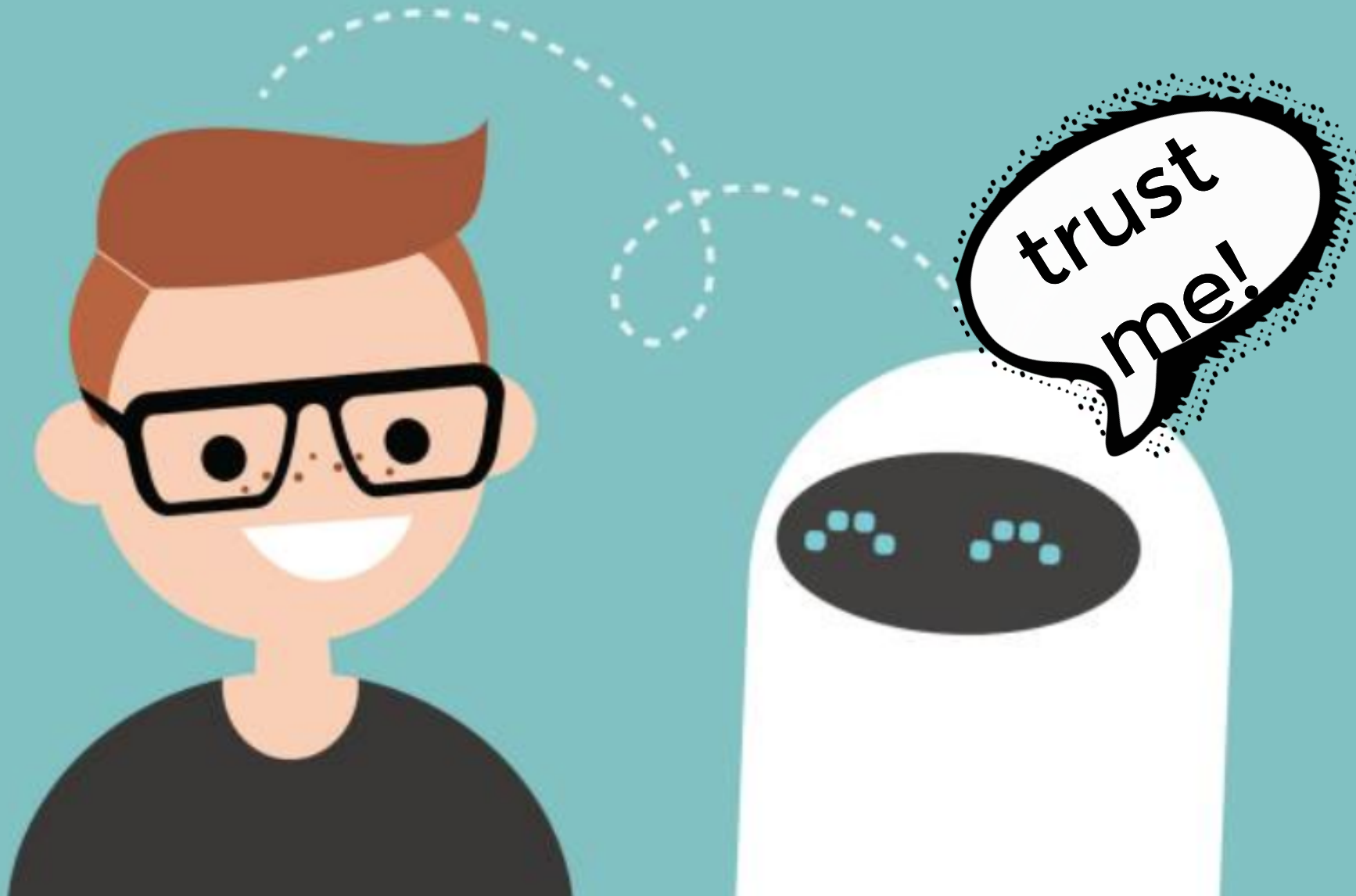
~Moshe Milman & Adam Carmi

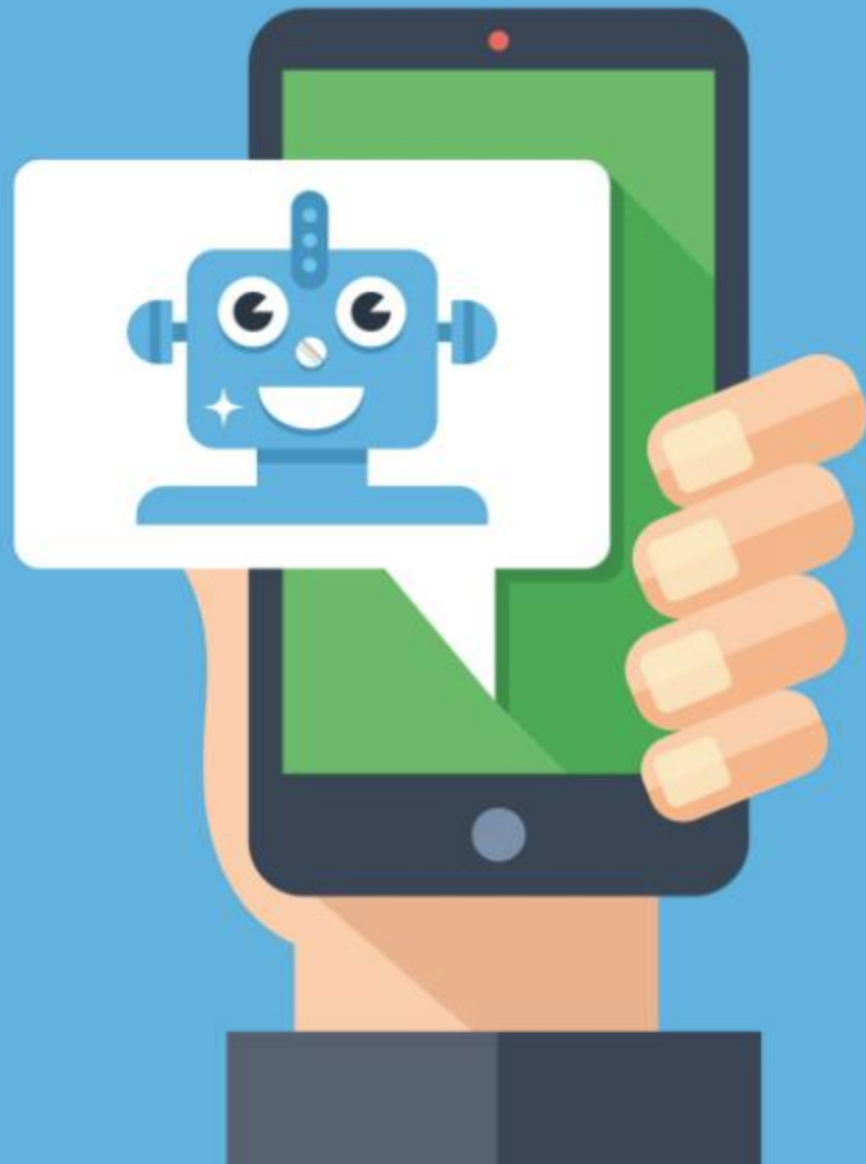


AI's interactions with  
the system [under test]  
will multiply results  
you'd have with manual  
testing.

~Jeremias Rößler







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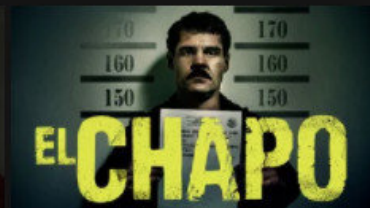
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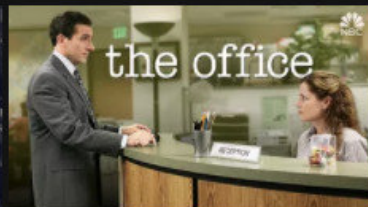
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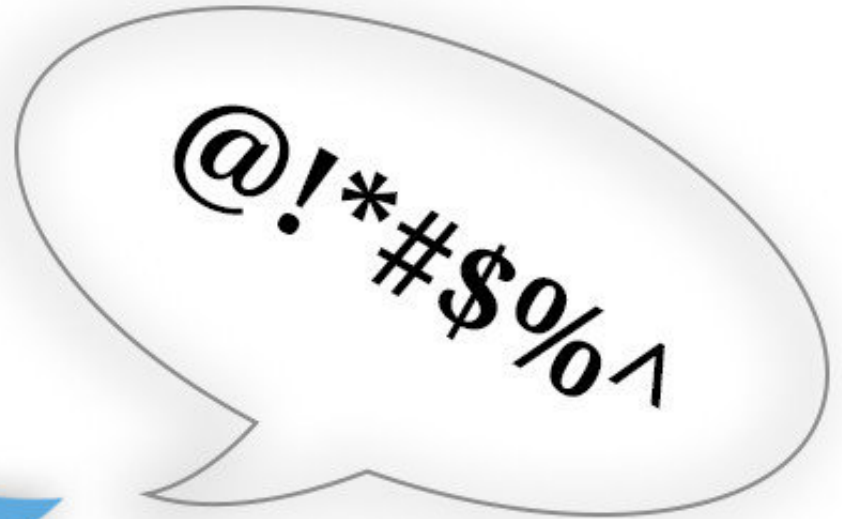
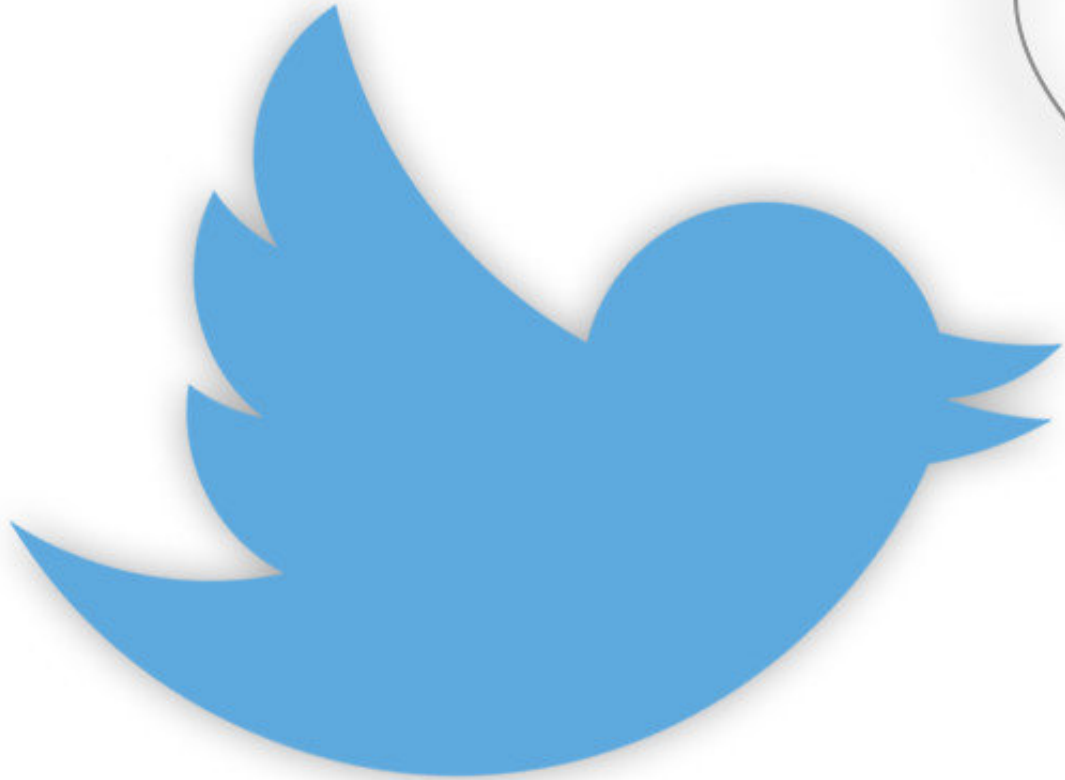


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# How would you test this?



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# How would you test this?



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**John Doe**

@johndoe



Message us if you're looking to buy  
some followers, \$2 per 1k





**John Doe**

@johndoe

 **Follow**

hey [@WannabeCeleb](#), you have a total of 2k fans. why dont you go buy some followers?





Health Care  
Doctor  
Hospital  
Pharmacist  
Nurse  
Dentist  
First Aid  
Surgeon  
Emergency

MEDICAL

MEDICAL

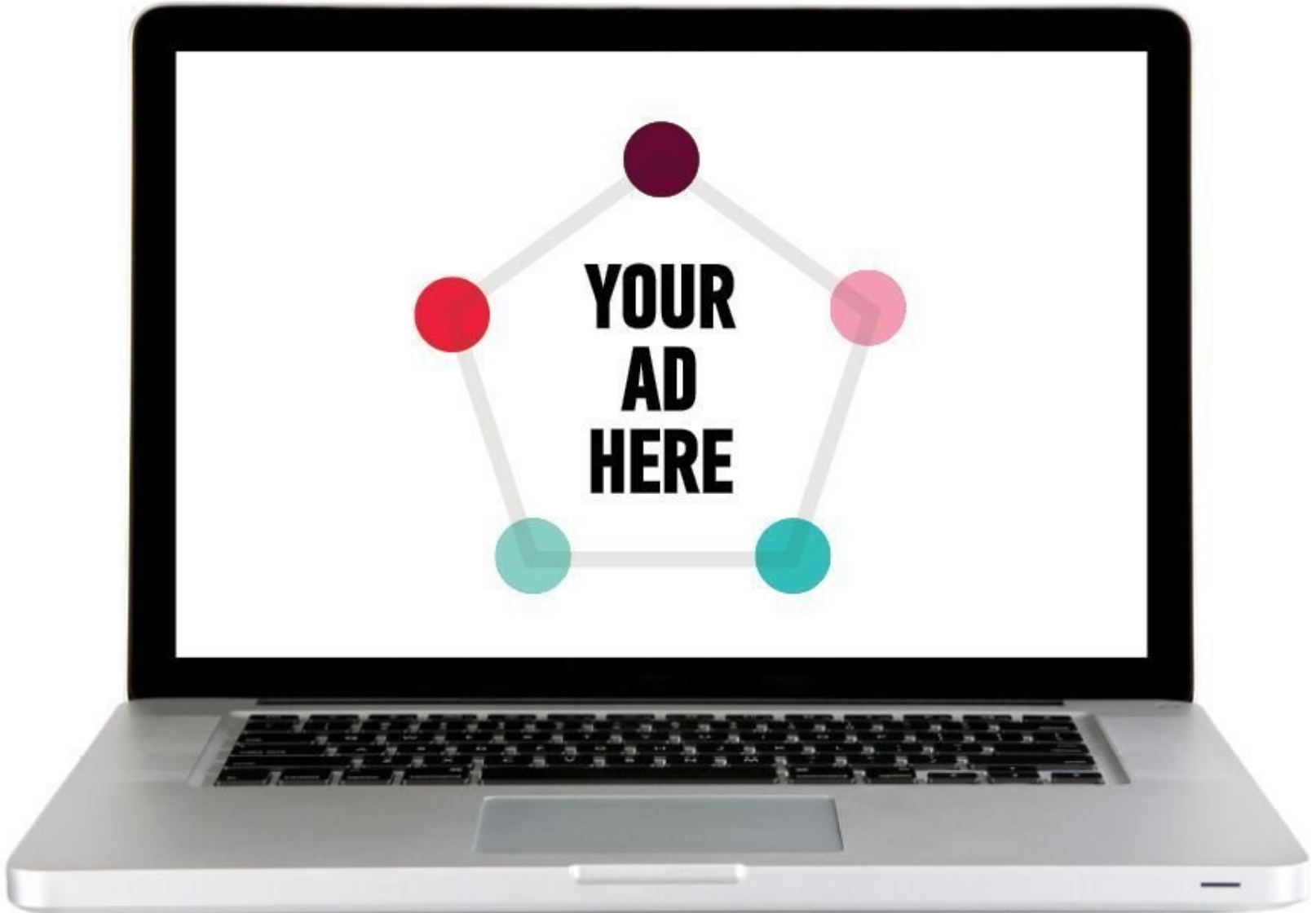
MEDICAL

# How would you test this?

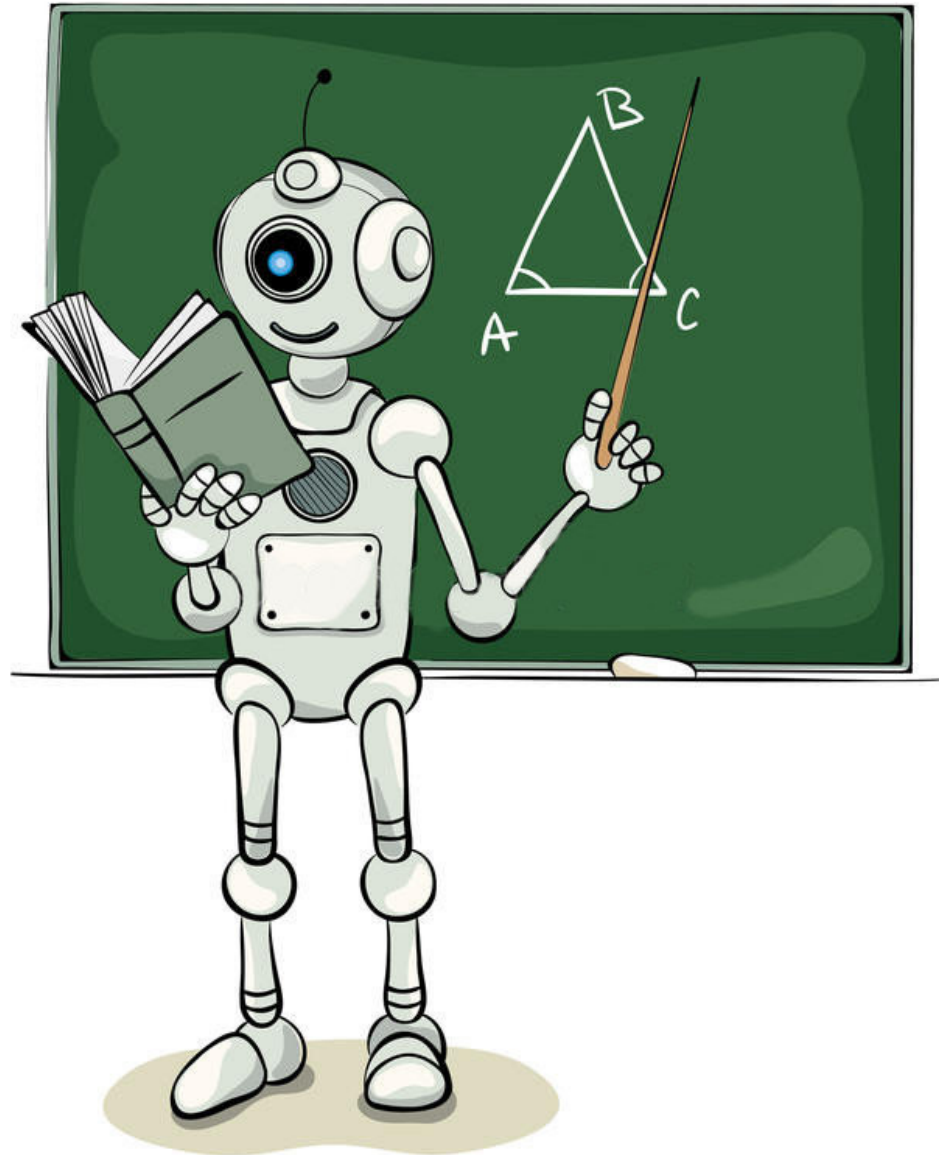


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# Learn How It Learns





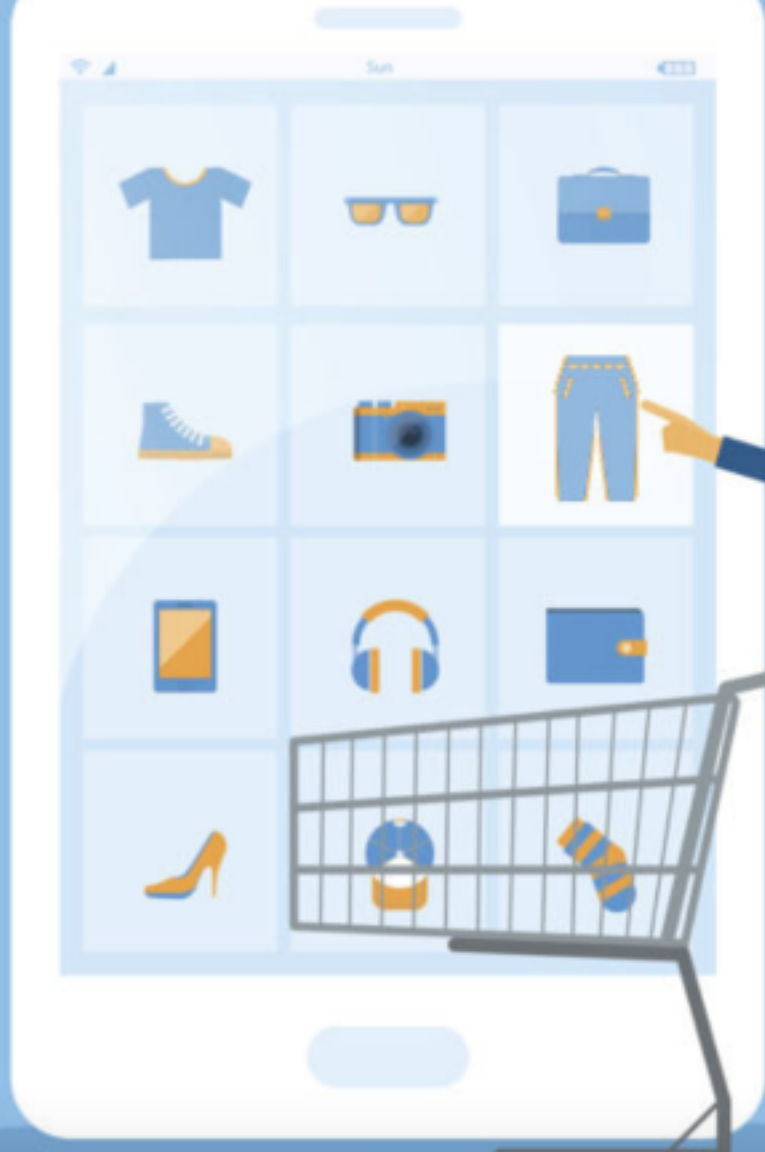
# Train the System



2000

48-  
50%

5



20%

65%

2%

| Ad       | Women who saw | Women who purchased | Men who saw | Men who purchased |
|----------|---------------|---------------------|-------------|-------------------|
| Dress    | <b>202</b>    | <b>133</b>          | 204         | 3                 |
| Trousers | 205           | 3                   | <b>196</b>  | <b>128</b>        |
| Scarf    | 199           | 2                   | 203         | 3                 |
| Gloves   | 194           | 1                   | 198         | 1                 |
| Belt     | 197           | 1                   | 202         | 2                 |

# Test It



POCS:  $>20$

| <b>Ad</b> | <b>Women who saw before</b> | <b>Women who saw after</b> | <b>Men who saw before</b> | <b>Men who saw after</b> |
|-----------|-----------------------------|----------------------------|---------------------------|--------------------------|
| Dress     | <b>202</b>                  | <b>890</b>                 | 204                       | 874                      |
| Trousers  | 205                         | 66                         | <b>196</b>                | <b>59</b>                |
| Scarf     | 199                         | 18                         | 203                       | 24                       |
| Gloves    | 194                         | 14                         | 198                       | 19                       |
| Belt      | 197                         | 15                         | 202                       | 21                       |

What did I do  
wrong?





# Prove the findings



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As technology  
advances, so  
must our test  
approaches.



The need for automation became much more apparent.



There was still a  
need for  
thoughtful and  
critical testing.



Plain ole  
COMMON SENSE  
can still trump  
an algorithm.



O'REILLY®  
OSCON



# The ethics of self-driving cars

Paul Fenwick  
*Perl Training Australia*

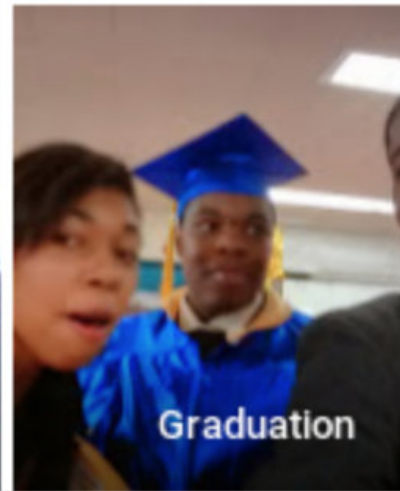
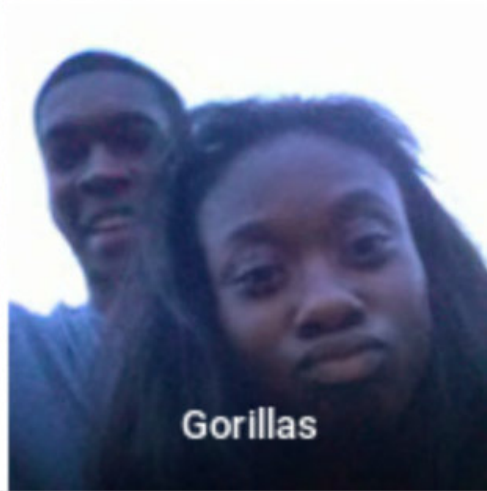
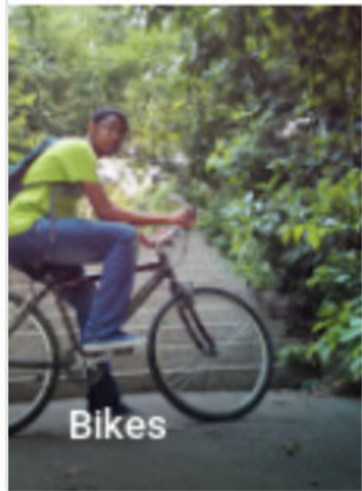
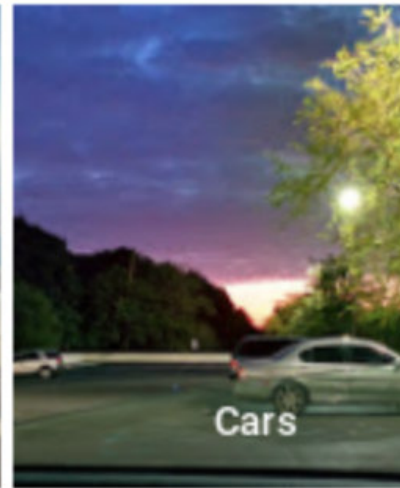
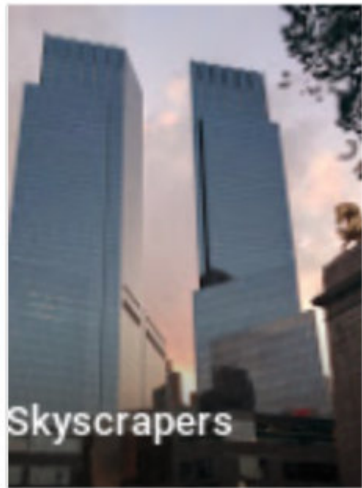
oscon.com | #oscon

# How would you test this?



@techgirl1908

Google Photos, y'all f██████████d up. My friend's not a gorilla.



6:22 PM - 28 Jun 2015

@techgirl1908





# The future is here...test it!

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