

AcCAPTCHA

Edoardo De Matteis

Sapienza University of Rome

Introduction

Completely Automated Public Turing test to tell Computers and Humans Apart.

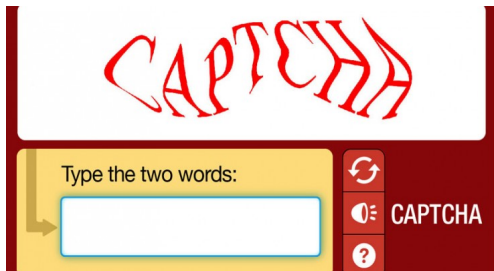
Introduction

Completely Automated Public Turing test to tell Computers and Humans Apart.

Any computer should be able to grade the test but not to pass it.

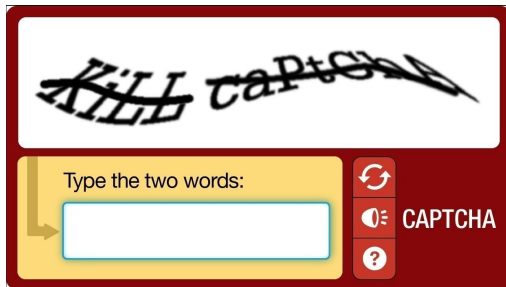
CAPTCHA

The original idea is based on the fact that humans are extremely good at pattern and optical character recognition.

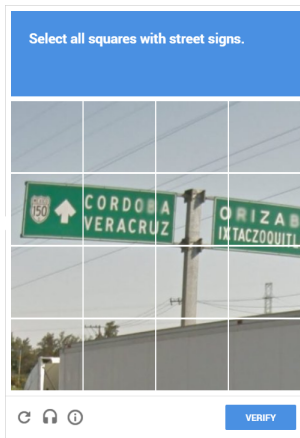


reCAPTCHA

Implements a consensus based policy, with the machine not needing to know the second word.

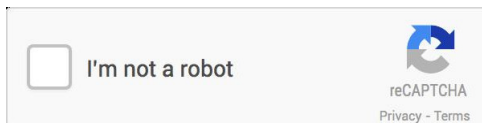


Consensus-based, this time with images.



NoCAPTCHA

Behavior-based and constantly running in the background.



The CAPTCHA problem is far from being solved and there are very few options for disabled people.

AcCAPTCHA is a starting point for an accessible CAPTCHA system.

Text recognition

AcCAPTCHA

What do you see in the text? Write it in the following box.

1 p 0 7 I j e M K U

Submit

Image classification

AcCAPTCHA

What do you see in the image? Select the correct option.



motorbike

airplane

person

fruit

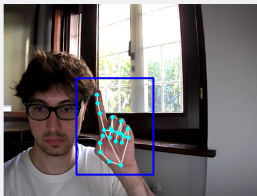
Submit

Finger counting

Below we have displayed a number, a timer and you. Show the target number with you fingers placing your hand inside the blue square. Do it before the timer stops.

1

4m10s



Finger counting

- ▶ MMPOSE's hand recognition reaches 84% AUC and 81% PCK@0.2.

Finger counting

- ▶ MMPOSE's hand recognition reaches 84% AUC and 81% PCK@0.2.
- ▶ Classic computer vision's issues.

Finger counting

- ▶ MMPOSE's hand recognition reaches 84% AUC and 81% PCK@0.2.
- ▶ Classic computer vision's issues.
- ▶ Cultural differences may or may not be a problem.

AcCAPTCHA

Press record and read the words below out loud.

reconverting

ergotinine

wagogo

irretraceably

stubbornly

Record

Word reading

- ▶ Google Cloud Speech API can be openly used with a public API token.
- ▶ Slow and does not perform well when dealing with non-english accents.
- ▶ Not suitable for non-personal use-cases.

Configuration

☐ Sight

☐ Speech

☐ Keyboard

☐ Mouse

☐ Camera

☐ Microphone

☐ Gesture

Submit

Thank you