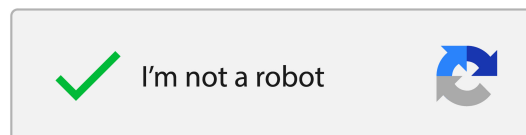
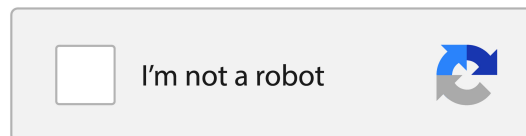




Breaking Google's reCAPTCHA v3

Anyone who has spent some time on the internet has encountered CAPTCHAs meant to deter bots from web pages by requiring a problem to be solved, which only humans are supposed to be able to do. However, as machine learning models have become more advanced and have been shown to break CAPTCHAs, this begs the question: Are CAPTCHAs even relevant any more? Methods to break CAPTCHAs involve, for instance, sending the problem to a third party and having a human solve it for a small fee. In general, most websites use Google's reCAPTCHA v2 and v3. The v2 CAPTCHA asks the user to solve an image classification or segmentation task. The v3 CAPTCHA is more subtle and the user does not interact with it visibly. In prior work, we have shown to be able to break reCAPTCHA v2, but now we want to break v3 as well using, for instance, reinforcement learning.



Requirements:

Prior experience and a strong interest in machine learning, reinforcement learning, and web development are recommended. Creativity and programming skills are advantageous.

Interested? Please contact us for more details!

Contact

- Andreas Plesner: aplesner@ethz.ch, ETZ G95