



Intuitech challenge

Real or Rendered: The Authenticity Challenge

How can you make sure that a selfie video - captured by a phone - is really showing the person who created that specific recording?

Introduction to the challenge

We at Intuitech built the first online KYC (Know Your Customer) solution in the Hungarian banking sector. It's a process used by businesses and financial institutions to verify the identity of their clients or customers. In our process there is a part where our customers need to create a short selfie-video with their phones and read aloud three numeric characters shown in their display. But here is the catch, with the newest results of generative AI and deepfake methods, we need to continuously improve our solution to trace the signs of inauthenticity.

Your challenge is to build a solution, which is able to tell from a short video, that the person on the video is real, the recording was captured by the phone itself and optionally validate the audio on the recording as well (not required to use the same process that we are using - 3 digits read out loud).

We are happy to find out if you will create some innovational new method for the authenticity check, but here are some example ideas what you can use to start brainstorming:

- Check whether the person is alone (visually) or not
- Check if the eyes and lips of the person are open
- Check the color composition of the different part of the image (background and subject)
- Check if there are any blur or glare in the video
- Check if there is only one person's voice in the recording
- Check if the lipsync is matching the audio

Who we are

We are Intuitech, where bright minds come together to redefine the digital landscape! As a pioneering digitalization studio, we specialize in driving organizations towards excellence through the dynamic synergy of technology and artificial intelligence.

We are passionate about creating imaginative digital solutions that unlock the complexity of modern challenges.

We are not just a team; we are a collective force of energetic, motivated and diverse individuals.

Our common goal: To make a meaningful impact on the world by empowering outstanding organizations to become even greater.

What we will provide

We wanted to create a challenge where you don't need to use any external tools/data/software, you just need to capture a short video and start thinking how to validate it. Hence it will be easy to create the "good" training data (that is a selfie video from you, talking to the camera), you will need to produce some fake data as well.

Some ideas for that:

- Record a video, where a person is shown without lip movements and a different person is talking
- Record a video where more person is visible at the same time
- Record a video where different persons are visible after each other
- Use some AI tools to create a deep fake version of yourself (we will not propose here any specific tools, but we know that you will be reaching the mark :))

Our mentor team is able to help validate any of your ideas, and help with the implementation.

Implementation and technology

Mainly we are looking for a solution which takes a selfie video as an input (and potentially some digits / text to validate the audio track) and gives you an analysis on the authenticity as an output. That can be either a global confidence score, or a combination of different confidence scores, booleans, text, analysis etc. In other words any other innovation in the context of authenticity validation is also acceptable from our side.

You are free to create your prototype in whatever technology you wish - just make sure the final solution could (in the future) be run on the server side. Keep an eye out for the security of your solution and explain the compromises you've made during the prototyping phase.

Judging criteria

Innovativeness & impact

- We are interested in a solution that brings some new innovative idea to the table which helps us to further improve our KYC solution and stand out in the market

Sustainability & feasibility

- We are looking for a solution which is easy to integrate based on modern software development standards
- We are interested if your solution can be further upgraded (even if not in the scope of the current challenge)

Performance

- We want to see that your solution performs well (we will test it on 50 videos - 40 good, 10 fake - and see if you catch the fraudsters)
- We will check the runtime of your solution, usually we need to finish the whole KYC procedure under 5 seconds, so that can be serve as a baseline

Prototype & presentation

- We are looking for an MVP solution, with a comprehensive understanding on its limitations
- We want to see that you can convince us to use your solution, or any outstanding part of it

Prize

Prize for the winner of this challenge: 1,500 €