Mimic Me! report by Yevgen Nerush

This report outlines the rules and implementation of the very simple game called Mimic Me!

Rules of the game

When game is started, there is only 5 seconds to mimic emoji displayed on the upper-right corner. If emoji is successfully mimicked, current score is increased by 1 and new random emoji is generated to be mimicked. It is worth to mention that for each randomly generated emoji the total score is also increased by 1.

(optional) You can restart the game as well

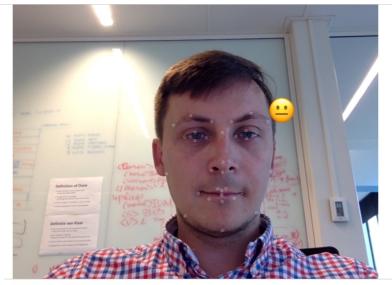
In order to reset the game, first thing that we need to to is to set correct and total emoji scores to 0. Second, we need to generate new random emoji and reschedule random emoji generation routine for new game.

(optional): Call a function to initialize the game, if needed

As new emojies should be randomly generated by schedule, the emoji random generator is scheduled when the detector is initialized and ready for running.

Call your function to run the game (define it first!)

When face and its features are successfully detected, we delegate dominante emoji to play function, which is responsible for checking whether mimicked emoji matches randomly generated one. If unicode codes of mimicked and generated emojies are equal, play function increases both correct and total scores, assignes new random emoji and reschedules emoji generation routine.



Mimic Me!



Score: 0 / 1

Start Stop Reset

INSTRUCTIONS

- Press **Start** to initialize the detector.
- · Your current emoji will be shown next to your head.
- Mimic each emoji being displayed to score a point!
 Press Stop to end the detector.
- Watch the tracking results and log messages for more information.

EMOTION TRACKING RESULTS

Timestamp: 11.20 Number of faces found: 1

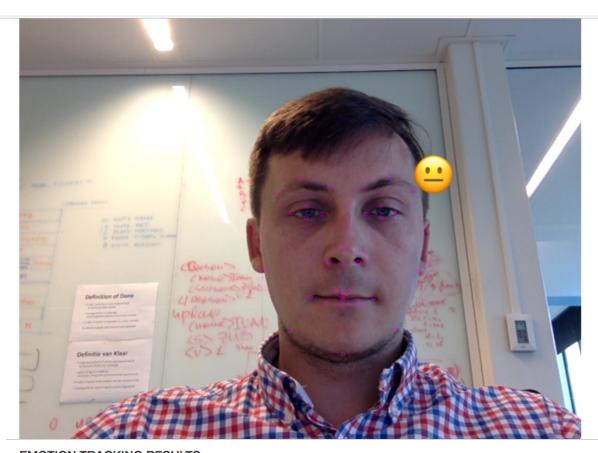
Appearance: ("gender": "Male", "glasses": "No", "age": "55 - 64", "ethnicity": "Caucasian"}
Emotions: {"joy":0, "sadness":0, "disgust":0, "contempt":0, "anger":0, "fear":0, "surprise":0, "valence":0, "engagement":0}

DETECTOR LOG MSGS

Start button pressed Webcam access allowed The detector reports initialized

Set the stroke and/or fill style you want for each feature point marker

It is very simply to do with Context API. Just assign RGBA value to the strokeStyle property of the context, where RBGA stands for RED, GREEN, BLUE and ALHPA channels.



EMOTION TRACKING RESULTS

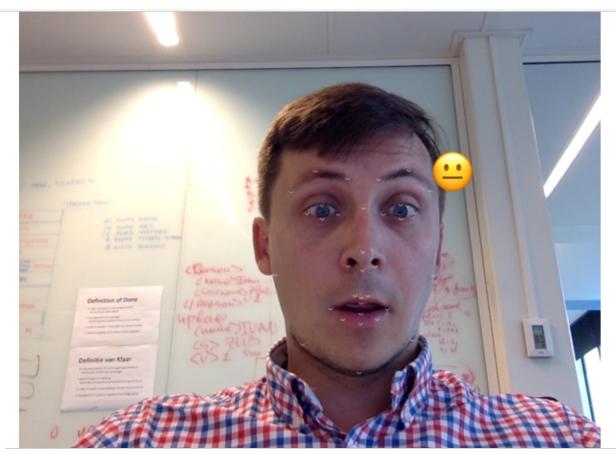
Timestamn: 15.81

Draw feature point, e.g. as a circle using ctx.arc()

Its very easy to draw arc with Context API. What we need to do is to draw arc for each feature point of the given face using code snippet listed below:

```
ctx.beginPath();
ctx.arc(x,y,2,0,2*Math.PI);
ctx.stroke();
```

where x and y represent coordinate of the face feature, 2 stands for the radius of the circle, 0 stands for the starting angle in radians to start drawing from. The last argument represents 360 degrees in radians to complete the drawing started with the third argument. No magic, just simple school math.



EMOTION TRACKING RESULTS

Timestamp: 13.13 Number of faces found: 1

Set the font and style you want for the emoji

It is very easy to draw emoji as text. Just set the desired font first:

```
ctx.font = '48px serif';
```

Draw it using ctx.strokeText() or fillText()

Very simple, just call standard Context API to draw the text:

```
ctx.fillText(emoji, x, y);
```

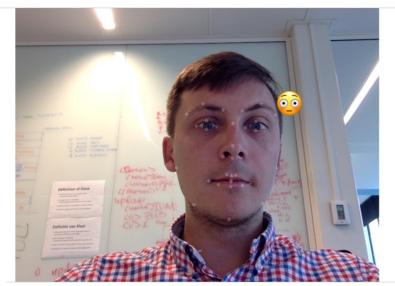
where <code>emoji</code> argument represents dominant emoji, x and y represent the point where it should be rendered. As all the features of the face have statically defined indices, we use coordinates of one of the rightmost features with index 10.



EMOTION TRACKING RESULTS

Define any variables and functions to implement the Mimic Me! game mechanics

Here we define correct and total variables to track emoji recognition process. There is one more timeoutHandle custom variable, which is used for random emoji generation routine rescheduling. Along with variables, there are three companion functions: getRandomEmoji for random emoji generation, play for mimicked emoji recognition and generateRandomEmoji for scheduling random emoji generator.



Mimic Me!



Score: 6 / 14

Start Stop Reset
INSTRUCTIONS

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- Press Stop to end the detector.
- Watch the tracking results and log messages for more information.

EMOTION TRACKING RESULTS

Timestamp: 53.72 Number of faces found: 1

Appearance: {"gender":"Male", "glasses": "No", "age": "55 - 64", "ethnicity": "Caucasian"}

 $Emotions: \{"joy":0,"sadness":0,"disgust":0,"contempt":0,"anger":0,"fear":4,"surprise":45,"valence":0,"engagement":58\} \\ Expressions:$

DETECTOR LOG MSGS

Start button pressed Webcam access allowed The detector reports initialized