



Smile

20221050 신지선

Inspiration



Pierre Auguste Renoir

A painter who painted Happiness

Whenever I see his painting, I find myself smiling because of the bright and pleasant energy in the work.

Renoir passionately painted his entire life enduring a deprived childhood, unknown and poor period. He always looked at the beautiful side without blaming or resenting the world.

I think Renoir's attitude toward life is clearly telling these days' society full of disgust and distrust. I took an idea from his life and wanted to create a project that could remind people of the importance of happiness and a smile.

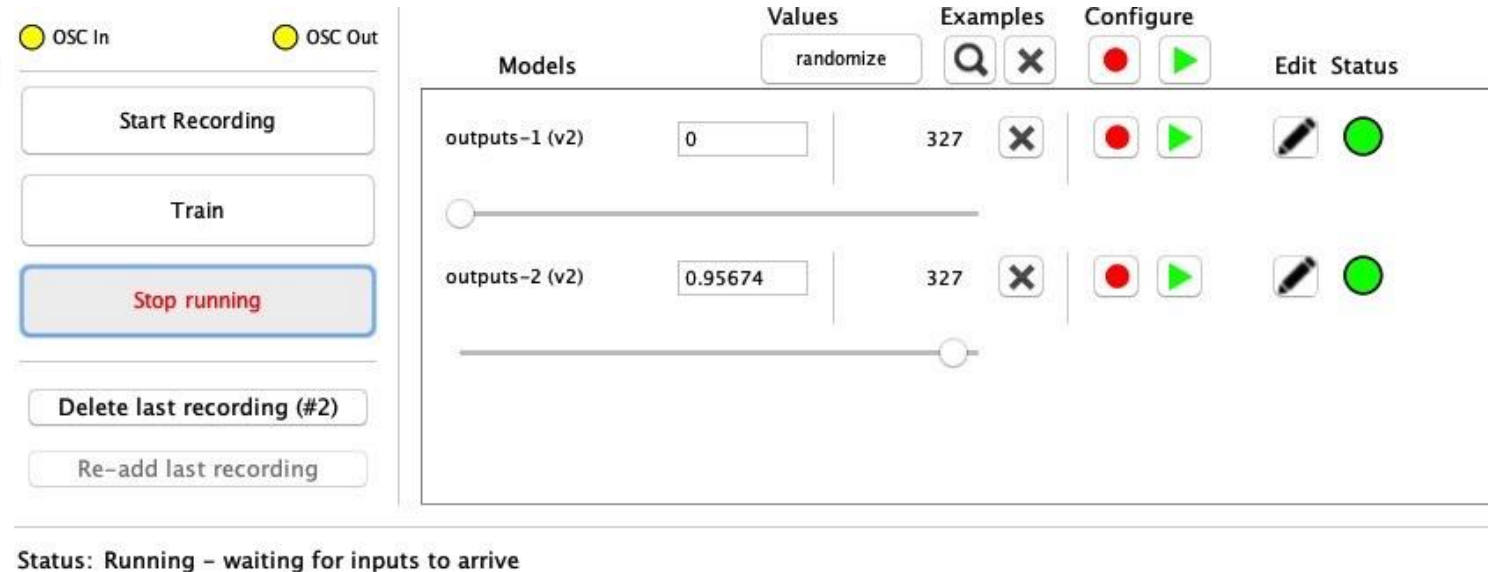
1) Wekinator

ML model that outputs a value close to zero if the user laughs and a value close to 1 if not laughing

Output values were received in an array.

```
void oscEvent(OscMessage m) {
  try {
    if (m.addrPattern().equals("/wek/outputs")) {
      if (m.typetag().length() == wekinatorOutputs.length) {
        for (int i = 0; i < m.typetag().length(); i++) {
          if (i < wekinatorOutputs.length) { // 배열 인덱스 유효한지 확인
            wekinatorOutputs[i] = m.get(i).floatValue();
          }
          if (wekinatorOutputs[1] > 0.8) { // NonSmile
            smile = false;
          }
        }
      }
    }

    if (m.addrPattern().equals("/gesture/mouth/width")) {
      if (m.checkTypetag("f")) { // 입력값이 있는지 확인
        inputs[0] = m.get(0).floatValue(); // 첫 번째 입력 값
        sendToWekinator(inputs);
      }
    } else if (m.addrPattern().equals("/gesture/mouth/height")) {
      if (m.checkTypetag("f")) { // 입력값이 있는지 확인
        inputs[1] = m.get(0).floatValue(); // 두 번째 입력 값
        sendToWekinator(inputs);
      }
    }
  }
}
```



2 Input ->

- 1) /gesture/mouth/width
- 2) /gesture/mouth/height

1 Output ->

- 0 - Smiling
- 1 - Not Smiling

Save Output Value(Float) in Arrays ->

wekinatorOutputs[i]



The user drew with the mouse
on the left picture

-> The portion is copied to the right
canvas

2) Drawing

```
float scalar = 1;

void keyReleased(){
    if(key == '1'){
        currImage = images[0];
    }
    if(key == '2'){
        currImage = images[1];
    }
    if(key == '3'){
        currImage = images[2];
    }
    if(key == '4'){
        currImage = images[3];
    }
    if(key == 'p'){//plus
        scalar++;
    }
    if(key == 'm'){//minus
        scalar--;
    }
}
```



1



2



3



4

Press 'p' -> Expand

Press 'm' -> Reduce

According to the user's keyboard input,

Picture and the size change



Users can create a collage picture
they want
&
Click the button after finishing
the picture,



Finish Drawing



If the user smiles, nothing happens,
If the user stops laughing, the color disappears and
turns into a black and white picture

Code

```
void drawSource(){
    source.beginDraw();
    source.background(0);
    source.imageMode(CENTER);
    source.push();
    source.translate(source.width/2, source.height/2);
    source.scale(scalar);
    //currImage.filter(GRAY);
    source.image(currImage, 0, 0);
    source.pop();
    source.endDraw();
}

void drawTarget(){
    target.beginDraw();

    buffer_target = source.get();

    if(frameCount == 1){
        target.background(255);
    }

    sx = mouseX;
    sy = mouseY;
    sw = 50;
    sh = 50;

    dx = mouseX;
    dy = mouseY;
    dw = 50;
    dh = 50;

    if(mousePressed){
        target.copy(buffer_target, sx, sy, sw, sh, dx, dy, dw, dh);
    }
    target.endDraw();
}
```

```
void draw(){
    background(255);
    drawSource();
    drawTarget();

    image(source, 0, 0);
    image(target, Poster_W, 0);

    //Image 범위 표시
    noFill();
    stroke(255);
    strokeWeight(4);
    if(mouseX > 500){
        noStroke();
    }
    rect(mouseX, mouseY, sw, sh);

    // Finish Drawing 버튼
    fill(buttonColor);
    rect(455, 430, 90, 20);
    fill(textColor);
    textAlign(CENTER, CENTER);
    textSize(11);
    text("Finish Drawing", 500, 440);

    if (drawingFinished && smile == false) {
        captureImage = get(Poster_W, 0, 999, 449);
        finalImage = captureImage.copy();
        image(finalImage, 0, 0);
        finalImage.filter(GRAY);
        image(finalImage, Poster_W, 0);
        noLoop();
    }
}
```