

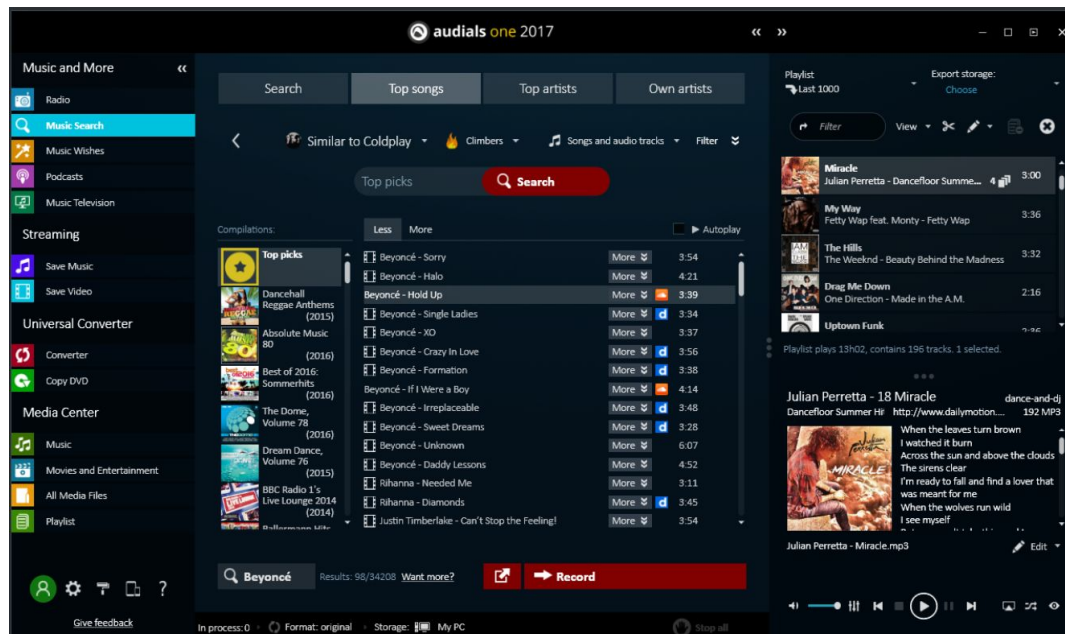
# MusicMood

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yg2520 jw3535 pt2508 yh3052

# Our Purpose

Want some music recommendation suit for your current emotion?



# Our Web Application

The screenshot displays a web application interface with a dark grey background. At the top, a large yellow banner features a baby wearing headphones, with the text "HAPPY Put Your Hands Up!" and a progress bar. Below this, the interface is divided into three main sections: "Emotion Scorer", "Analysis", and "Music".

**Emotion Scorer:** This section shows a photograph of a man laughing. Below the photo is a URL: [https://s3.amazonaws.com/gyq-photos/front/final\\_recog.html#myCarousel](https://s3.amazonaws.com/gyq-photos/front/final_recog.html#myCarousel).

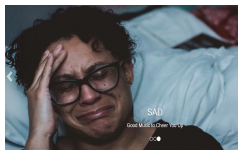
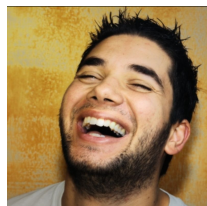
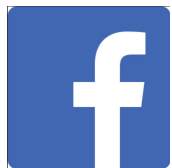
**Analysis:** This section contains a radar chart with five axes labeled "Happy", "Sad", "Calm", "Angry", and "Confused". The "Happy" axis is highlighted in blue, indicating the detected emotion.

**Music:** This section displays a list of three music tracks, each with a play button, a progress bar, and a share icon:

- 21** by Adele
- Camila** by Camila Cabello
- reputation Stadium Tour** by Taylor Swift

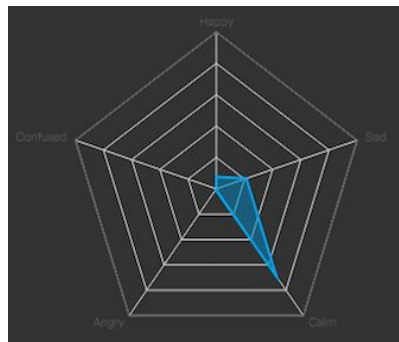
# Pipeline

Facebook Login

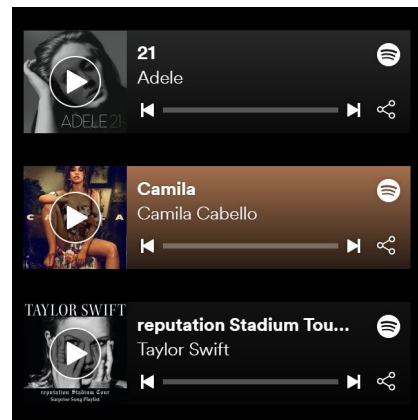


Upload Your Photo

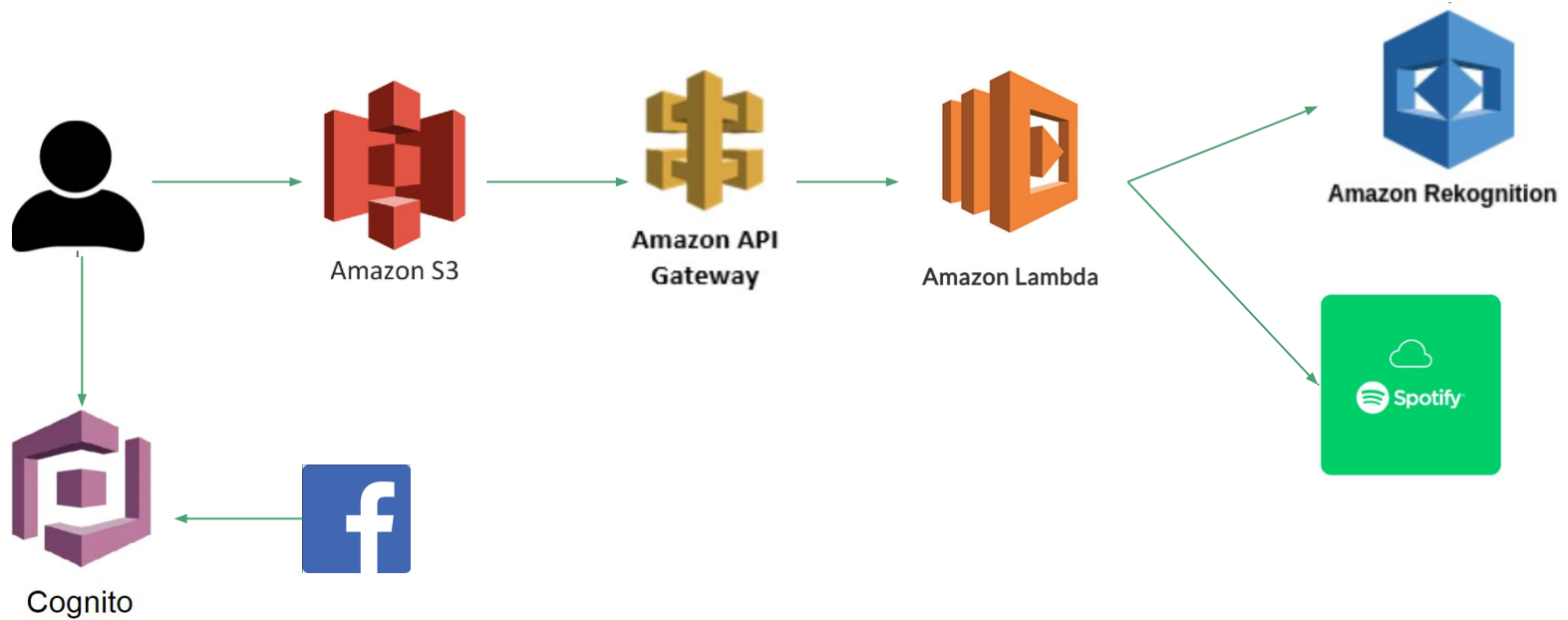
Get an emotion analysis



Our Music recommendation



# Structure



# Frontend

<


>

Upload your face photos here

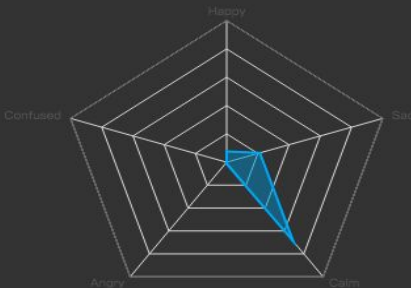
**HAPPY**  
Put Your Hands Up!

●○○○


### Emotion Scorer



### Analysis




### Music




**Suicide Squad: The Alb...**  
Various Artists

⏮ ⏭ ⏩ ⏸



**In the Name of Love**  
Martin Garrix, Bebe Rexha

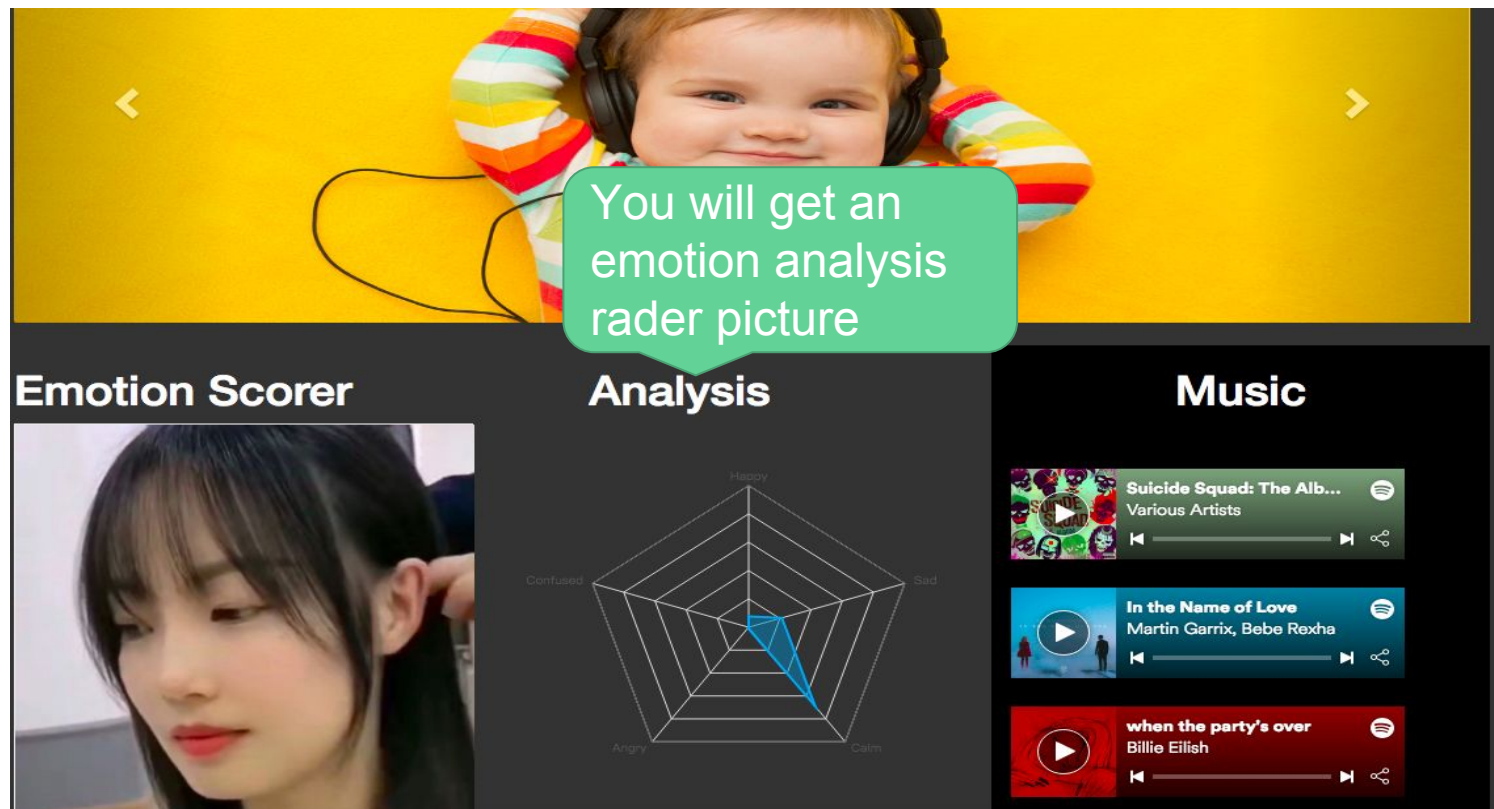
⏮ ⏭ ⏩ ⏸



**when the party's over**  
Billie Eilish


⏮ ⏭ ⏩ ⏸

# Frontend

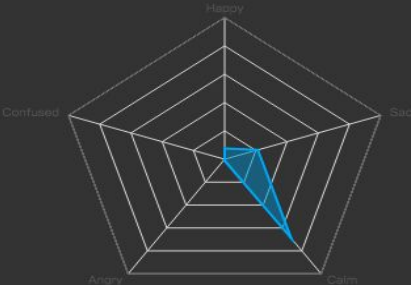


You will get an emotion analysis rader picture

## Emotion Scorer






## Analysis



Emotion	Intensity (approximate)
Happy	1.0
Sad	0.5
Angry	0.5
Calm	3.0
Confused	1.0

## Music

-  **Suicide Squad: The Alb...**  
Various Artists
-  **In the Name of Love**  
Martin Garrix, Bebe Rexha
-  **when the party's over**  
Billie Eilish



# Frontend (code)

```
function radarLoad(happyScore, sadScore, clamScore, angryScore, confusedScore){
    var players = [
        { player: "User1", Happy: happyScore, Sad: sadScore, Calm: clamScore, Angry: angryScore, Confused: confusedScore}, ];
    var team = {Happy: 100, Sad: 100, Calm: 100, Angry: 100, Confused: 100 };
    var labels = [ [0, "Happy"], [1, "Sad"], [2, "Calm"], [3, "Angry"], [4, "Confused"] ];
    var get_player = function(name) {
        for (var i=0; i<players.length; i++) {
            if (players[i].player === name) return players[i];
        }
    }
    var player_data = function(name) {
        var obj = {}, i = 0;
        obj.label = name;
        obj.data = [];
        for (var key in team) {
            obj.data.push([i, get_player(name)[key]]);
            i++;
        };
        return obj;
    };
    Flotr.draw(
        document.getElementById("chart"),
        [
            player_data("User1")
        ],{
            title:"Emotion Analysis",
            radar:{show:true},
            legend:{show:false},
            grid:{circular:true},
            xaxis:{ticks:labels, fontSize:15},
            yaxis:{showLabels:false,min:0,max:100},
        }
    );
}
```



# Frontend

The image displays the frontend of an application designed for emotion recognition and music recommendation. The interface is divided into several sections:

- Top Banner:** A large yellow banner featuring a baby wearing headphones. The text "HAPPY" is prominently displayed in the center, with "Put Your Hands Up!" written below it. A green speech bubble on the right side of the banner contains the text "There are 3 musics for you".
- Emotion Scorer:** A section on the left side of the interface showing a video feed of a woman's face, which is being analyzed for emotional state.
- Analysis:** A central section displaying a radar chart. The chart has five axes labeled "Happy", "Sad", "Calm", "Angry", and "Confused". A blue line connects the data points on these axes, indicating the detected emotion. The "Happy" axis shows the highest value, suggesting the user is happy.
- Music:** A section on the right side of the interface listing three recommended songs, each with a play button, progress bar, and share icon:
  - Suicide Squad: The Alb...** by Various Artists
  - In the Name of Love** by Martin Garrix, Bebe Rexha
  - when the party's over** by Billie Eilish

# Frontend (code)

```
function httpGet(happyScore)
{
    var xmlHttp = new XMLHttpRequest();
    xmlHttp.open( "GET", 'https://c1yoy0a9j5.execute-api.us-east-1.amazonaws.com/beta/search?happy='+happyScore, false);
    xmlHttp.send();
    console.log(xmlHttp.responseText);
    var musicJson = JSON.parse(xmlHttp.response);
    console.log(musicJson.tracks);
    //console.log(musicJson.tracks[0].album.uri.substring(0));
    var album1 = musicJson.tracks[0].album.uri.substring(14);
    document.getElementById("music1").innerHTML = '<iframe src="https://open.spotify.com/embed/album/'+album1+'" width="';
    var album2 = musicJson.tracks[1].album.uri.substring(14);
    document.getElementById("music2").innerHTML = '<iframe src="https://open.spotify.com/embed/album/'+album2+'" width="';
    var album3 = musicJson.tracks[2].album.uri.substring(14);
    document.getElementById("music3").innerHTML = '<iframe src="https://open.spotify.com/embed/album/'+album3+'" width="';
}
```

# Backend: Emotion analysis API



Detectface API

## Emotion Scorer



选择文件 sad1.jpg

Happy Sad Calm Angry Confused

4.83 4.66 71.18 4.33 0.00

# Backend: Emotion analysis API

```
//Calls DetectFaces API and shows estimated ages of detected faces

function DetectFaces(imageData) {
  AWS.region = "us-east-1";
  var rekognition = new AWS.Rekognition();
  var params = {
    Image: {
      Bytes: imageData
    },
    Attributes: [
      'ALL',
    ]
  };
  rekognition.detectFaces(params, function (err, data) {
    if (err) console.log(err, err.stack); // an error occurred
    else {
      var table = "<table><tr><th>Happy</th><th>Sad</th><th>Calm</th><th>Angry</th><th>Confused</th></tr>";
      // show each face and build out estimated age table
      for (var i = 0; i < data.FaceDetails.length; i++) {
        for (var j=0; j<data.FaceDetails[i].Emotions.length; j++) {
          if (data.FaceDetails[i].Emotions[j].Type=="HAPPY"){
            var happyScore = data.FaceDetails[i].Emotions[j].Confidence.toFixed(2);
          }
          if (data.FaceDetails[i].Emotions[j].Type=="SAD"){
            var sadScore = data.FaceDetails[i].Emotions[j].Confidence.toFixed(2);
          }
          if (data.FaceDetails[i].Emotions[j].Type=="CALM"){
            var clamScore = data.FaceDetails[i].Emotions[j].Confidence.toFixed(2);
          }
        }
      }
    }
  });
}
```

# Backend: Music recommendation API

Spotify

## Get Recommendations Based on Seeds

Create a playlist-style listening experience based on seed artists, tracks and genres.

Recommendations are generated based on the available information for a given seed entity and matched against similar artists and tracks. If there is sufficient information about the provided seeds, a list of tracks will be returned together with pool size details.

```
1 import json
2 from botocore.vendored import requests
3
4 def lambda_handler(event, context):
5     # TODO implement
6     h = event['queryStringParameters']['happy']
7     happy = (float(h)+1)/2
8     client_id = "175f21eafc104cefac621120d257ae3f"
9     client_secret = "1660d911f7f64b09a12eb45465e3fade"
10    grant_type = 'client_credentials'
11    body_params = {'grant_type': grant_type}
12    url='https://accounts.spotify.com/api/token'
13    response=requests.post(url, data=body_params, auth = (client_id, client_secret))
14    res = response.content.decode()
15    access_token = json.loads(res)["access_token"]
16    print(access_token)
17    headers = {"Authorization": "Bearer " + access_token}
18    url = 'https://api.spotify.com/v1/recommendations?limit=5'
19    params = {
20        'seed_genres': 'pop',
21        'seed_tracks': '0c6xIDDpzE81m2q797ordA',
22        'max_danceability': happy,
23        'max_valence': happy,
24        'max_energy': happy,
25        'market': "US"
26    }
27
28    response = requests.get(url, params=params, headers=headers)
29    return {
30        'statusCode': 200,
31        'headers': {
32            "Access-Control-Allow-Origin" : "*"
33        },
34        'body': response.content.decode()
35    }
```

# Demo

[https://s3.amazonaws.com/gyq-photos/front/final\\_recog.html](https://s3.amazonaws.com/gyq-photos/front/final_recog.html)

[https://s3.amazonaws.com/gyq-photos/front/final\\_recog\\_cognito.html](https://s3.amazonaws.com/gyq-photos/front/final_recog_cognito.html)