

Google API – 얼굴 인식

1. request용 json 파일 생성

- 1) 먼저 사용할 이미지를 base64 인코딩을 해줍니다.
- 2) 그 후 request용 json 파일을 만듭니다. 저는 face_detection_request.json이라는 파일을 만들었습니다.

```
face_detection_request.json
스키마: <선택된 스키마가 없음>
1  {
2    "requests": [
3      {
4        "image": {
5          "content": "/9j/4AAQSkZJRgABAQAAQABAAD//gA7Q1JFQVRPUjogZ2QtanB1ZyB2MS4wICh1c2luZyBJSkcgS1BFYyB2NjIjIplCBxdWfsaXR5ID0gODUK/9sAQwAFawQEBAMFBAQEBAQUFBGcMCAcHBwcPCwsJD8EPEhIRDA=
6        },
7        "features": [
8          {
9            "maxResults": 10,
10           "type": "FACE_DETECTION"
11         }
12       ]
13     }
14   ]
15 }
```

2. power shell로 request 요청 보내기

- 해당 내용들을 입력합니다.

```
PS C:\Users\memen> $env:GOOGLE_APPLICATION_CREDENTIALS="VisionTest-b7032df5ad1f.json"
PS C:\Users\memen> $cred = gcloud auth application-default print-access-token
PS C:\Users\memen> $headers = @{"Authorization" = "Bearer $cred" }
PS C:\Users\memen> Invoke-WebRequest `
>> -Method POST `
>> -Headers $headers `
>> -ContentType: "application/json; charset=utf-8" `
>> -InFile face_detection_request.json `
>> -Uri "https://vision.googleapis.com/v1/images:annotate" | Select-Object -Expand Content
```

- 테스트한 이미지는 우측과 같습니다.



```
{
  "responses": [
    {
      "faceAnnotations": [
        {
          "boundingPoly": {
            "vertices": [
              {
                "x": 131,
                "y": 68
              },
              {
                "x": 537,
                "y": 68
              },
              {
                "x": 537,
                "y": 541
              },
              {
                "x": 131,
                "y": 541
              }
            ]
          },
          "fdBoundingPoly": {
            "vertices": [
              {
                "x": 184,
                "y": 184
              },
              {
                "x": 488,
                "y": 184
              },
              {
                "x": 488,
                "y": 538
              },
              {
                "x": 184,
                "y": 538
              }
            ]
          }
        }
      ]
    }
  ],
  "landmarks": [
    {
      "type": "LEFT_EYE",
      "position": {
        "x": 300.29285,
        "y": 318.7812,
        "z": 0.0002708435
      }
    },
    {
      "type": "RIGHT_EYE",
      "position": {
        "x": 407.71808,
        "y": 363.49768,
        "z": 29.781965
      }
    },
    {
      "type": "LEFT_OF_LEFT_EYEBROW",
      "position": {
        "x": 276.00616,
        "y": 278.31686,
        "z": -8.920706
      }
    },
    {
      "type": "RIGHT_OF_LEFT_EYEBROW",
      "position": {
        "x": 343.7747,
        "y": 316.00244,
        "z": -22.026894
      }
    },
    {
      "type": "LEFT_OF_RIGHT_EYEBROW",
      "position": {
        "x": 397.33783,
        "y": 331.67133,
        "z": -8.9009495
      }
    },
    {
      "type": "RIGHT_OF_RIGHT_EYEBROW",
      "position": {
        "x": 457.37683,
        "y": 353.35327,
        "z": 41.275585
      }
    }
  ],
  {
    "type": "MIDPOINT_BETWEEN_EYES",
    "position": {
      "x": 359.58786,
      "y": 351.59152,
      "z": -8.170563
    }
  },
  {
    "type": "NOSE_TIP",
    "position": {
      "x": 330.26248,
      "y": 423.41794,
      "z": -19.170595
    }
  },
  {
    "type": "UPPER_LIP",
    "position": {
      "x": 309.8308,
      "y": 450.98996,
      "z": 19.382095
    }
  },
  {
    "type": "LOWER_LIP",
    "position": {
      "x": 291.41785,
      "y": 482.36575,
      "z": 39.390156
    }
  },
  {
    "type": "MOUTH_LEFT",
    "position": {
      "x": 262.08514,
      "y": 441.69098,
      "z": 42.6977
    }
  },
  {
    "type": "MOUTH_RIGHT",
    "position": {
      "x": 335.7416,
      "y": 472.48135,
      "z": 65.19286
    }
  },
  {
    "type": "MOUTH_CENTER",
    "position": {
      "x": 300.21176,
      "y": 464.37427,
      "z": 33.326317
    }
  },
  {
    "type": "NOSE_BOTTOM_RIGHT",
    "position": {
      "x": 348.24033,
      "y": 428.67804,
      "z": 33.14921
    }
  },
  {
    "type": "NOSE_BOTTOM_LEFT",
    "position": {
      "x": 294.42657,
      "y": 408.39365,
      "z": 17.33437
    }
  },
  {
    "type": "NOSE_BOTTOM_CENTER",
    "position": {
      "x": 319.4593,
      "y": 431.52435,
      "z": 11.684716
    }
  },
  {
    "type": "LEFT_EYE_TOP_BOUNDARY",
    "position": {
      "x": 305.3664,
      "y": 307.03223,
      "z": -10.748865
    }
  },
  {
    "type": "LEFT_EYE_RIGHT_CORNER",
    "position": {
      "x": 319.03525,
      "y": 332.27036,
      "z": 7.008724
    }
  },
  {
    "type": "RIGHT_EYE_TOP_BOUNDARY",
    "position": {
      "x": 413.3664,
      "y": 307.03223,
      "z": 10.748865
    }
  },
  {
    "type": "RIGHT_EYE_RIGHT_CORNER",
    "position": {
      "x": 419.03525,
      "y": 332.27036,
      "z": 7.008724
    }
  }
]
```

```
{
  "type": "LEFT_EYE_BOTTOM_BOUNDARY",
  "position": {
    "x": 294.24353,
    "y": 327.0007,
    "z": 1.3441181
  }
},
{
  "type": "LEFT_EYE_LEFT_CORNER",
  "position": {
    "x": 278.51782,
    "y": 308.0335,
    "z": 4.2992115
  }
},
{
  "type": "RIGHT_EYE_TOP_BOUNDARY",
  "position": {
    "x": 416.57724,
    "y": 355.95282,
    "z": 20.29528
  }
},
{
  "type": "RIGHT_EYE_RIGHT_CORNER",
  "position": {
    "x": 429.55508,
    "y": 369.25235,
    "z": 46.274708
  }
},
{
  "type": "RIGHT_EYE_BOTTOM_BOUNDARY",
  "position": {
    "x": 406.4926,
    "y": 373.55356,
    "z": 32.037548
  }
},
{
  "type": "RIGHT_EYE_LEFT_CORNER",
  "position": {
    "x": 386.1762,
    "y": 358.24393,
    "z": 24.575827
  }
},
}
```

```
{
  "type": "LEFT_EYEBROW_UPPER_MIDPOINT",
  "position": {
    "x": 315.9403,
    "y": 287.74384,
    "z": -26.142439
  }
},
{
  "type": "RIGHT_EYEBROW_UPPER_MIDPOINT",
  "position": {
    "x": 433.5657,
    "y": 335.05487,
    "z": 5.9520206
  }
},
{
  "type": "LEFT_EAR_TRAGION",
  "position": {
    "x": 224.84456,
    "y": 249.28818,
    "z": 130.97151
  }
},
{
  "type": "RIGHT_EAR_TRAGION",
  "position": {
    "x": 444.5752,
    "y": 394.76248,
    "z": 199.44994
  }
},
{
  "type": "FOREHEAD_GLABELLA",
  "position": {
    "x": 372.8611,
    "y": 326.52936,
    "z": -19.190878
  }
},
{
  "type": "CHIN_GNATHION",
  "position": {
    "x": 261.49994,
    "y": 520.98486,
    "z": 72.06828
  }
},
}
```

```
{
  "type": "CHIN_LEFT_GONION",
  "position": {
    "x": 198.05634,
    "y": 378.90863,
    "z": 122.7622
  }
},
{
  "type": "CHIN_RIGHT_GONION",
  "position": {
    "x": 380.36624,
    "y": 461.75244,
    "z": 179.60866
  }
},
{
  "position": {
    "x": 247.66817,
    "y": 377.60962,
    "z": 29.514782
  }
},
{
  "position": {
    "x": 390.5949,
    "y": 435.82205,
    "z": 69.84374
  }
},
],
"rollAngle": 27.360174,
"panAngle": 14.8092375,
"tiltAngle": -18.458298,
"detectionConfidence": 0.8530427,
"landmarkingConfidence": 0.5179217,
"joyLikelihood": "VERY_UNLIKELY",
"sorrowLikelihood": "VERY_UNLIKELY",
"angerLikelihood": "VERY_UNLIKELY",
"surpriseLikelihood": "VERY_UNLIKELY",
"underExposedLikelihood": "VERY_UNLIKELY",
"blurredLikelihood": "VERY_UNLIKELY",
"headwearLikelihood": "VERY_UNLIKELY"
}
```