

OPENCV

```
import cv2
```

```
cap = cv2.VideoCapture(0) # open laptop camera
```

```
while True:
```

```
    ret, frame = cap.read()
```

```
    if not ret:
```

```
        break
```

```
    cv2.imshow("Webcam", frame)
```

```
    if cv2.waitKey(1) == ord('q'):
```

```
        break
```

```
cap.release()
```

```
cv2.destroyAllWindows()
```

DeepFace

```
from deepface import DeepFace
```

```
# frame comes from the webcam loop above
```

```
try:
```

```
    result = DeepFace.analyze(frame, actions=['emotion'], enforce_detection=False)
```

```
    print(result)
```

```
except:
```

```
    print("no face detected")
```

Emotion Code

```
emotion = result["dominant_emotion"]
```

```
confidence = result["emotion"][emotion] # number between 0–100
```

```
print("Emotion:", emotion, "Confidence:", confidence)
```

Interval for emotions

```
interval = confidence / 100.0
```

```
print("Interval:", interval)
```

Emotion Mapping

```
mapping = {  
    "happy": 1.0,  
    "neutral": 0.5,  
    "sad": 0.2  
}
```

```
interval = mapping.get(emotion, 0.5) # default to 0.5 if unknown  
print("Mapped Interval:", interval)
```

Text Output

```
import cv2  
from deepface import DeepFace  
import numpy as np  
  
cap = cv2.VideoCapture(0)  
  
while True:  
    ret, frame = cap.read()  
    if not ret:  
        break  
  
    # analyze emotion  
    try:  
        result = DeepFace.analyze(frame, actions=['emotion'], enforce_detection=False)  
        emotion = result["dominant_emotion"]  
        message = f"You are {emotion}"  
    except:  
        message = "No face detected"  
  
    # create a blank text window (black background)  
    text_window = np.zeros((200, 600, 3), dtype=np.uint8)  
  
    # put text inside the blank window  
    cv2.putText(  
        text_window,  
        message,  
        (20, 120),  
        cv2.FONT_HERSHEY_SIMPLEX,  
        1,
```

```
(255, 255, 255),  
    2  
)
```

```
# show two windows: webcam + text  
cv2.imshow("Vibey Camera", frame)  
cv2.imshow("Emotion Result", text_window)
```

```
if cv2.waitKey(1) == ord('q'):  
    break
```

```
cap.release()  
cv2.destroyAllWindows()
```