```
import cv2
import os
import matplotlib.pyplot as plt

# Load Haar Cascade classifiers for face and eye detection (pre-trained models)
face_cascade = cv2.CascadeClassifier(cv2.data.haarcascades + 'haarcascade_frontalface_default.xml')
eye_cascade = cv2.CascadeClassifier(cv2.data.haarcascades + 'haarcascade_eye.xml')

# Function to detect if eyes are closed (drowsiness detection)
def detect_drowsiness(image):
    gray = cv2.cvtColor(image, cv2.COLOR_BGR2GRAY)

    # Detect faces
    faces = face_cascade.detectMultiScale(gray, 1.3, 5)

    for (x, y, w, h) in faces:
        # Draw rectangle around the face
        cv2.rectangle(image, (x, y), (x + w, y + h), (255, 0, 0), 2)
        roi_gray = gray[y:y+h, x:x+w]
        roi_color = image[y:y+h, x:x+w]

        # Detect eyes within the face region
        eyes = eye_cascade.detectMultiScale(roi_gray)

        if len(eyes) == 0:
            # No eyes detected -> Drowsy (eyes might be closed)
            cv2.putText(image, "Drowsy", (x, y - 10), cv2.FONT_HERSHEY_SIMPLEX, 0.9, (0, 0, 255), 2)
        else:
            # Eyes detected -> Not drowsy
            cv2.putText(image, "Not Drowsy", (x, y - 10), cv2.FONT_HERSHEY_SIMPLEX, 0.9, (0, 255, 0), 2)

        for (ex, ey, ew, eh) in eyes:
            cv2.rectangle(roi_color, (ex, ey), (ex + ew, ey + eh), (0, 255, 0), 2)

    return image

# User input for the dataset folder and the specific image
dataset_path = input("Enter the path to your dataset folder: ")
image_name = input("Enter the name of the image file (with extension, e.g., 'image1.jpg'): ")

# Construct the full image path
image_path = os.path.join(dataset_path, image_name)

# Check if the image exists
if not os.path.exists(image_path):
    print(f"Error: The image '{image_name}' was not found in the dataset path '{dataset_path}'.")
else:
    # Load the image
    image = cv2.imread(image_path)

    # Detect drowsiness based on eyes
    result_image = detect_drowsiness(image)

    # Convert BGR (OpenCV format) to RGB for matplotlib
    result_image_rgb = cv2.cvtColor(result_image, cv2.COLOR_BGR2RGB)

    # Display the result using matplotlib
    plt.imshow(result_image_rgb)
    plt.axis('off')  # Hide axes for better visualization
    plt.show()
```

```
Enter the path to your dataset folder: /content/drive/MyDrive/drowsiness dataset
Enter the name of the image file (with extension, e.g., 'image1.jpg'): /content/drive/MyDrive/drowsiness dataset/Fatigue/image_0159.jpg
```