Task 1:

```
selected_files = []  # List to collect file paths

for i in range(4):
    fileNum = random.randint(10, 99)  # Pick a random image number between 10 and 99
    files = glob.glob(BAGLS_PATH + "/*" + str(fileNum) + "*")  # Find the corresponding data files to the picked image number
    selected_files.append(files)  # Add image and mask files to the list

print(selected_files)
```
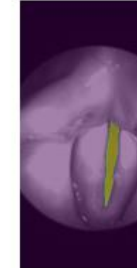
Task 2:

Status:
Muscle tension dysphonia with nodules

Status:
healthy

Status:
healthy

Status:
healthy

Task 4:
The **luminosity method** is preferred for RGB to grayscale conversion because it better reflects human perception, giving more weight to the green channel, which the human eye is most sensitive to. This method provides a more accurate and visually pleasing grayscale image
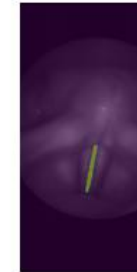
Task 3:

Original   Lightness Method   Average Method   Luminosity Method
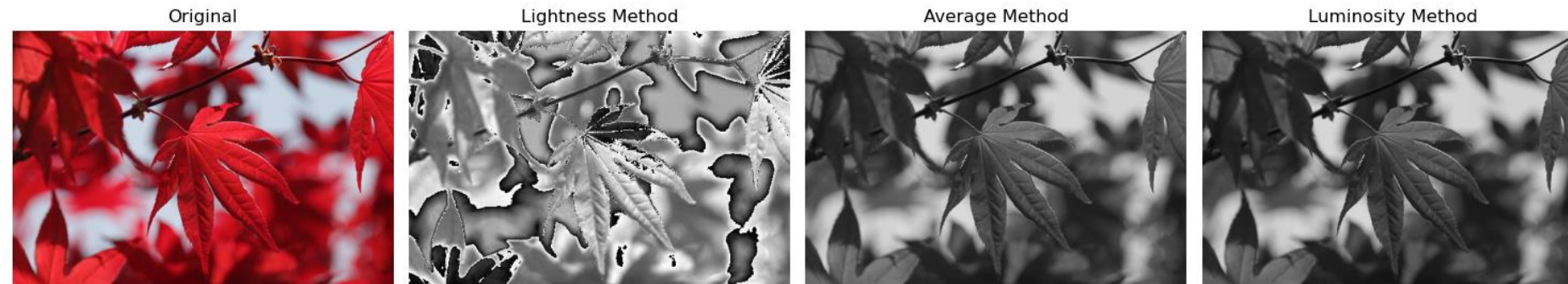
Name: Constantin Wolff
Mat. Num.: 22442020
IdM: lu11synu