

COMPUTER VISION LAB: 3

NAME: KHUSHI AGRAWAL

ROLL NO.: 191020429

BRANCH: DSAI

SYSTEM CONFIGURATION

- DISTRIB_ID = ManjaroLinux
- DISTRIB_RELEASE = 21.1.1
- RAM GB: 16

AIM

Perform the following aim:

- Perform grey-level transformation
- Perform grey level slicing with and without background.

FILE STRUCTURE

Consists of the following files and folders:

- **ques-1.py:** Lab program to implement grey level transformation. It includes the implementation of *Negative Image Transformation*, *Logarithmic Image Transformation* and *Power Law Transformation*.
- **ques-2.py:** Lab program to implement grey level slicing with and without background.
- **images/:** This folder contains the input image used while implementation and the result obtained by the given programs.

Note: All the programs are implemented in OpenCV-Python and NumPy.

GREY LEVEL TRANSFORMATION

Input Image



Grey-Scale Image



Negative Image Transformation



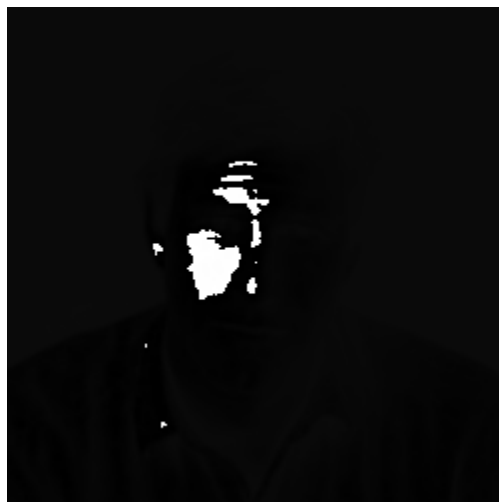
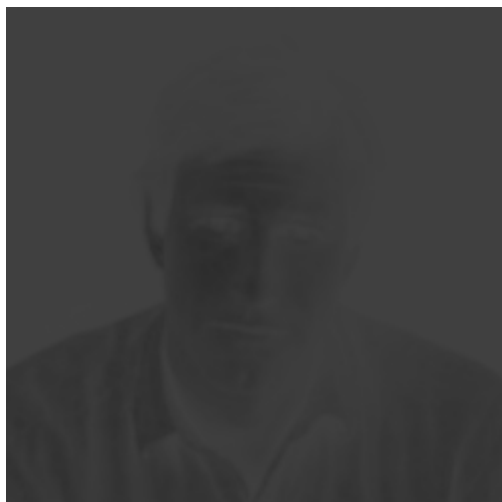
Logarithmic Image Transformation



Power Law Transformation ($\gamma = 2$) Power Law Transformation ($\gamma = 4$)



Power Law Transformation ($\gamma = 5$) Power Law Transformation ($\gamma = 6$)



GREY LEVEL SLICING WITH AND WITHOUT BACKGROUND

Input Image (For with background)



Input Image (For without background)



Output Image with Background

Grey-Scale Image



Transformed Image



Output Image without Background

Grey-Scale Image

Transformed Image