Project 1

Python for Research

Juan Garzón
Faculty of Engineering

A la Verdad. por la fe y la ciencia

Project 1: Image Proccesing

Objective:

To provide students with hands-on experience in image processing using Python, enabling them to proficiently manipulate, analyze, and extract meaningful information from images. Through practical application and collaborative problem-solving, students will enhance their skills in performing tasks such as object counting, image transformation, and segmentation, thereby preparing them for research and professional tasks in the field of image processing.

Project 1: Image Proccesing

You can select one of the following projects:

➢ Counting Objects in Images
➢ Changing Image Colors and Filters
➢ Image Segmentation on Maps
➢ Image Enhancement and Filtering
➢ Edge Detection in Images
➢ Image Histogram and Contrast Adjustment

If you wish to develop a different project, please inform the teacher before starting work.

Project 1: Image Proccesing

➢ Generate the report using Python (Pdf format).

➢ The report must include the basic information of the project, the developed code, and the obtained results.

➢ Include a video (the link to the video) explaining what you did on the project.

Bibliography

Chityala, R., & Pudipeddi, S. (2020). *Image processing and acquisition using Python*. Chapman and Hall/CRC.

Kapur, S. (2017). Computer Vision with Python 3. Packt Publishing.

Kinser, J. M. (2018). *Image Operators: Image Processing in Python*. CRC Press.

Python Cheatsheet - Python Cheatsheet

UCO
Universidad Católica de Oriente
Vigilada Mineducación

Renovación Acreditación Institucional en **ALTA CALIDAD**
Resolución 008912 29/06/2023

A la **Verdad,**
por la **fe**
y la **ciencia**

#Transformando*Vidas*

¡Gracias!