

# INT3404E 20 - Image Processing: Homework 1

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## 1 Goals

The goals of this homework are:

1. Learn basic Python, the structure of Python programs, and common libraries such as Numpy, OpenCV, Matplotlib, etc.
2. Get used to Google Colaboratory and Virtual Environments such as Anaconda.
3. Document with LaTeX, code version control with GitHub.

## 2 Preparatory Readings

Before you attempt the following exercises, read through Python, NumPy, and Matplotlib tutorials.

## 3 Exercises

### 3.1 Basic Python

Done in Course

### 3.2 Google Colaboratory

Done in Course, uploaded to GitHub repository.

### 3.3 OpenCV, Numpy, Matplotlib, and Latex

Report the result of Original Image, Gray-scale Image, Flipped Gray-scale Image, Rotated Gray-scale Image.



Figure 1: Original Image



Figure 2: Gray-scale Image

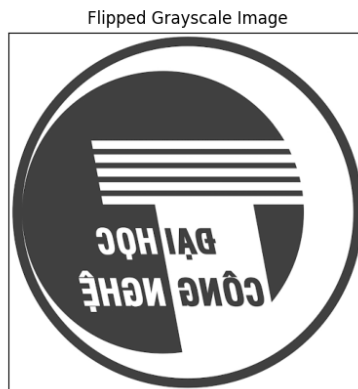


Figure 3: Flipped Gray-scale Image



Figure 4: Rotated Gray-scale Image