



PFP 191 - AI 18C - FPT University



# Assignment 2 Image Augmentation

Group VANDV



# CONTENT



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# MEMBERS

Nguyen Quoc Nhut  
Vo Mai Kha Vi  
Tran Huy Duong  
Nguyen Thi Tu Anh  
Tran Xuan Bao Viet

# Division of tasks

## TASK MANAGMENT

No	TASK	MEMBER	START DAY	END DATE	COMMENT	NOTE
1	Assignment tasks to each members	Quốc Nhựt	Wednesday, 25 October, 2023	Wednesday, 25 October, 2023	DONE	
2	Determine project goals and significance	All	Wednesday, 25 October, 2023	Wednesday, 25 October, 2023	DONE	
3	Research and analyzze project requirement	All	Thursday, 26 October, 2023	Thursday, 26 October, 2023	DONE	
4	Search for suitable images	Khả Vi - Tú Anh	Thursday, 26 October, 2023	Thursday, 26 October, 2023	DONE	
5	Design function	Quốc Nhựt - Bảo Việt - Huy Dương	Friday, 27 October, 2023	Sunday, 29 October, 2023	DONE	
6	Complete function and write code	Quốc Nhựt - Bảo Việt - Huy Dương	Monday, 30 October, 2023	Wednesday, 1 November, 2023	DONE	
7	Quality Assurance and Testing	Khả Vi - Tú Anh	Thursday, 2 November, 2023	Saturday, 4 November, 2023	DONE	
8	Performance Opitimization	All	Saturday, 4 November, 2023	Sunday, 5 November, 2023	DONE	
9	Design Presentation slides	Quốc Nhựt - Huy Dương	Sunday, 5 November, 2023	Monday, 6 November, 2023	DONE	
10	Review Presentation	All	Monday, 6 November, 2023	Tuesday, 7 November, 2023	DONE	
11	Presentation	All	Wednesday, 8 November, 2023	Wednesday, 8 November, 2023	DOING	
12	Answer Question from everyone	All	Wednesday, 8 November, 2023	Wednesday, 8 November, 2023	DOING	
13	Edit Projet after presentation	All	Thursday, 9 November, 2023	Thursday, 9 November, 2023	FUTURE	

## **Project goals and significance**



**The goal of the project is to help learners become familiar with some common libraries and image processing methods, creating a large number of images with limited image resources at first. At the same time, learners improve their programming abilities with Python.**



# Research and project requirement



Original image



augmentation →

Horizontal Flip



Crop



Median Blur



Contrast



Hue / Saturation / Value



Gamma



# Project goals and significance

## Input

- Image processing methods (or modify the configuration files)
- Number of expected output images.

## Output

- Images after processing.

## Learning rule

- PIL / OpenCV / etc.
- List, Dictionary, random.
- Image Processing methods combination.

# Research Image





# **Design function**

- 1. Rotation**
- 2. Translation**
- 3. Zoom**
- 4. Change Brightness**
- 5. Random Flip**
- 6. Change Color**

# 1.ROTATION



## 2. TRANSLATION



# 3. Zoom

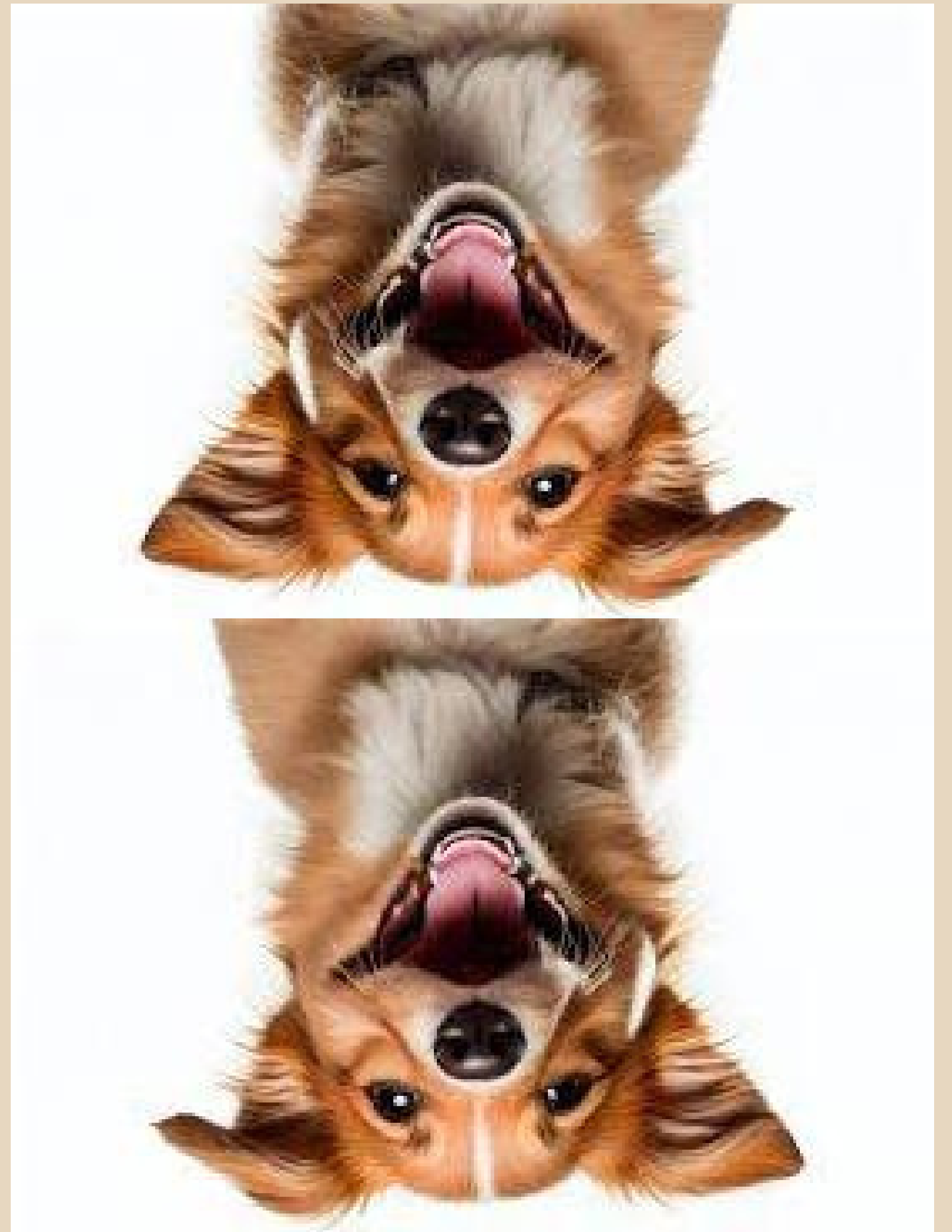


## 4.Change Brightness





## 5. Random Flip



## 6.CHANGE COLORS




# Introduction of the UI

Image Augmentation App V5

Image Selection

Choose Images

Remove Selected Images



Augmentation Methods

☐ Rotation

☐ Translation

☐ Zoom

☐ Change Brightness

☐ Random Flip

☐ Change Color

Number of augmented images per input:

10

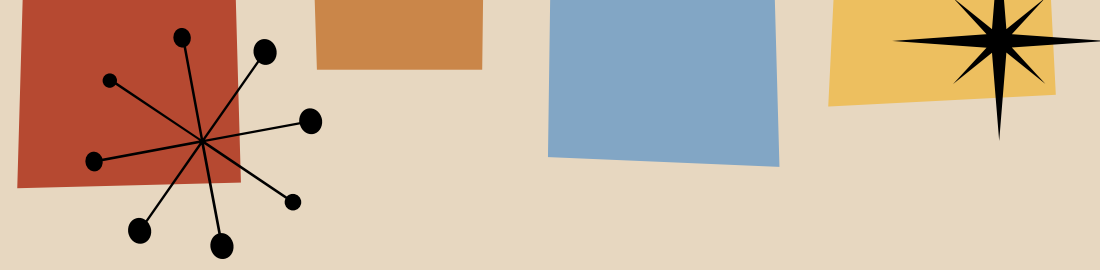
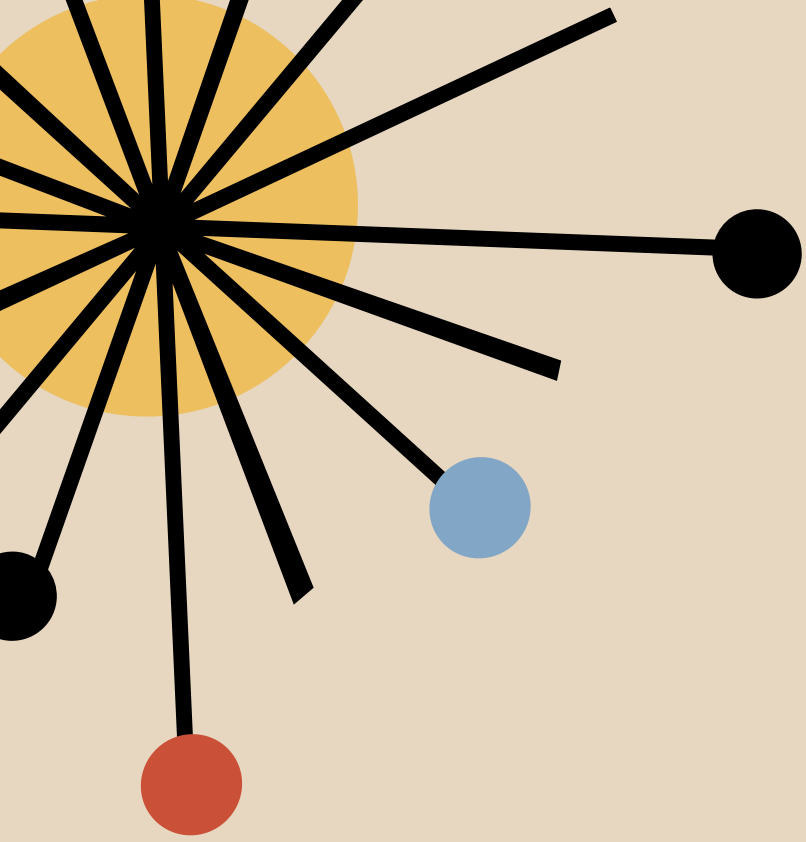
Generate Augmented Images

Progress:

Output Directory

d:/IMAGE

Change Output Folder



# Demo

