# Image Processing with OpenCV

## Purpose

This document describes a Python script that utilizes the OpenCV library to load, display, and save an image. The script is designed to work with a brain image and serves as a basic introduction to image processing tasks.

## Setup Instructions

## Prerequisites

* Python 3.x installed on your system
* OpenCV library installed

## Installation

To install OpenCV, open your terminal or command prompt and execute the following command:

***pip install opencv-python***

## Script

*import cv2*

*import matplotlib.pyplot as plt*

*image\_path = 'brain-image.jpg'*

*image = cv2.imread(image\_path)*

*if image is None:*

*print(f"Error: Unable to load image at {image\_path}")*

*else:*

*image\_rgb = cv2.cvtColor(image, cv2.COLOR\_BGR2RGB)*

*# Use matplotlib to display the image*

*plt.imshow(image\_rgb)*

*plt.axis('off')*

*plt.show()*

*output\_path = 'brain\_copy.jpg'*

*cv2.imwrite(output\_path, image)*

*print(f"Image saved to {output\_path}")*

# Execution

A computer screen shot of a computer screen

Description automatically generated