Digital Image Processing

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Project Report

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Description

The aim of this project is to develop a Python-based script that enables users to upload and edit portrait images. This application will facilitate the creation of personalized memory photo albums, offering various editing options and filters.

More specifically, the script will support three primary image formats: PNG, JPEG, and TIFF. If the user wont upload an image with the supported format, then he will get notified about it and he will need to adjust to the requirements.

Once the user uploads an image in one of the supported formats, the application provides a versatile editing interface. The user can select from a suite of filters and feature placements in order to edit the images. Users can review their edits in real-time, make adjustments as needed, and save the finished product in JPEG format, or choose to reset the canvas to start a new project, thereby facilitating a seamless workflow for creating memorable photo albums.

I will break down the steps we had to follow to complete the project.

- Step 1: Load image from requested formats or inform user about unsupported format.
- Step 2: Create 4 filters
- Step 3: Create a face and eye detection function to place elements (eg hats, glasses) on the faces and eyes. We will need to prepare a set of '.png' such elements.
- Step 4: Create a line detect function and a circles detect function to locate geometries, for placing frame and sticker elements. We will need to prepare a set of '.png' such elements.