RollShift AI

## Problem Definition

The main problem that is currently being faced in the Analog photography community is the lack of automatic film scans conversion platforms, this issue causes people to spend money on software or use a fully manual platform to edit their scans, which could be challenging for armatures and people who just happen to have film negatives around. RollShift AI is for analog photographers by an Analog photographer.

With the implementation of AI in every sector, many find it unbearable, especially in arts as many believe that AI should not be a part of AI as it strips away the human essences and emotions that define art. RollShift AI is made to show how AI can be implemented in arts with respect to art and artists as it serves a tool to assist not a tool to replace.

## Feasibility Study

RollShift AI aims to solve the community’s gap of a film negatives conversion platform. The existing community of analog artist struggles to find a platform as most of the existing applications are either too expensive or are not automated. As mentioned above, most artists are not found of AI being utilized in art as it eliminates the human element, RollShift AI intends to be the opposite of that. Instead of being a tool to replace men, it serves as a tool to assist them while also being mindful of the human emotions that make up art.

RollShift AI does not change or modify the film scans, it is like a film development lab’s scan just at your fingertips.

The project requires few resources. The physical resources that are being used include a film SLR (Single lens reflex) camera and various types of film rolls to take photos, A laptop / a desktop, a film development lab (Third-party) to develop the film. When it comes to digital resources, GitHub was used to store the project files. The project was completely coded in python using the following technologies:

* CV2 Library
* NumPy library
* Google CoLab
* Visual Studio code text editor
* Python interpreter
* PIL library
* Matplotlib library
* scikit-image library
* Streamlit

Skills and knowledge of film are crucial for this project, and to ensure that I expand my horizons I have attended a few film development workshops that taught me everything I need to know about the process to further deepen my understanding of film. Furthermore, I have had many discussions with other local analog photographers to get their perspective and input into the project.

RollShift AI has the potential to benefit a whole community of photographers, while the community may be small in Bahrain, that doesn’t change the fact that it still exists. The project does not only target active analog artists, but anyone with film negatives also laying around can make use of it to restore and digitize precious memories.

## Problem research

To ensure that the project serves the community the right way and effectively, I’ve done a lot of research including reading papers and reports as well as observing people’s opinions and uprising interest in film through social media. In addition to research, I have also discussed the issue with other local film artists whose opinions have refined my views and enabled me to gain a more clear vision.

## Project scope

The project’s main goal is to help analog photographers with the process of converting their negatives into color-positive images. The app allows the users to upload a color negative image to convert it into a color positive image using AI as well as allow users to edit the image manually to tailor to one’s taste.

Objectives include:

* Create a web interface
* Create an AI algorithm to convert the images
* Create a manual editing feature
* User accessibility
* Community-Oriented Development