UDEBLUR - AN IMAGE DEBLURRING SYSTEM

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ABSTRACT

Blurred images are a common problem in many industries, including technology, security, and photography. Image blurring can happen for many reasons, including camera shake, movements, and low-light conditions. As a result, essential details may be lost. The purpose of this project is to build an image deblurring system that uses deep learning to remove blur from images in order to provide a deblurred image that is better than the input image, especially for images taken in low light conditions.

A deep learning-based approach has been proposed to address this problem, which involves training a CNN-based model to learn the mapping between the blurred and corresponding Sharpe images using a dataset of blurred and Sharpe images. Various approaches such as image cropping, resizing, normalizing, and preprocessing will be used to improve the quality of the output image. The proposed approach is expected to outperform the existing approaches in terms of deblurring the low-light images.

In the initial implementation phase of building the prototype, the developed prototype shows that it can perform image deblurring however the prototype has to be improved by exploring more techniques and modifications to get the desired outcome.

Key Words: Image Deblurring System, Deep Learning, Low-light Images

Subject Descriptors:

- Computing methodologies → Artificial intelligence
- General and reference → Cross computing tools and techniques → Experimentation