

AI Based Image Restoration

Edwin Mittochi¹ and Mr. Jimu²

Student, BSC, DMI St John The Baptist University, Lilongwe, Malawi¹

Project Supervisor, BSC, DMI St John The Baptist University, Lilongwe, Malawi²

Abstract: *The Artificial Intelligence-Based Image Restoration is a desktop application that was developed for the main purpose of restoring the quality of degraded images. Image degradation is the process where by an image loses its quality and information from its original form to its degraded and low-quality form. It can occur when the images are being compressed and decompressed, when the images are scaled, device malfunction and during transmission which cause visual distortion, loss of quality, color, information and other important details. This project comes in to deal with the effect of image degradation with the help of an artificial intelligence algorithm K-Nearest Neighbor (KNN) which helps in the realistic manner or restoring the image quality. It is able to restore the quality of an image, add color to old colorless images and extract text from old documents. The system will use methodologies where it allows the programmer to focus on certain stages that the programmer thinks it was very important or the owner of the system has suggested and to provide a working product which are called the agile and RAD methodologies.*

Keywords: Image Restoration

REFERENCES

- [1] Adrian Rosebrock 2021 “Your First Image Classifier: Using k-NN to Classify Images” PyImage Search
- [2] Dmitry Ulyanov, Andrea Vedaldi, Victor Lempitsky 2020 “Deep Prior Image” Skoltech, Yandex, Oxford University, Skoltech
- [3] Software Testing Help 2019 “*what is system testing – a ultimate beginner’s guide*”
- [4] Aditya Arora, 2020 “Real Image Restoration via Improved Data Synthesis” CycleISP
- [5] Ruoyan Wang. 2022 “An Old Photo Image restoration processing Based on Deep Neural Network Structure” Zhongnan University of Economics and Law