

Image Processing using Python

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Abstract: *Image processing using Python has become increasingly prevalent due to the availability of powerful libraries such as OpenCV, Pillow (PIL), and scikit-image. This paper provides an overview of digital image processing techniques implemented in Python, focusing on common tasks and operations such as image enhancement, restoration, segmentation, feature extraction, and pattern recognition. We discuss the advantages of using Python for image processing, including its simplicity, versatility, and extensive library support. Through code examples and demonstrations, we illustrate how Python can be used to perform various image processing tasks efficiently and effectively. Additionally, we highlight the applications of digital image processing in different domains, including medical imaging, remote sensing, computer vision, and multimedia. Overall, this paper serves as a comprehensive guide to digital image processing using Python, catering to researchers, practitioners, and enthusiasts interested in leveraging Python for image analysis and manipulation.*

Keywords: Image Processing, Python, OpenCV

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