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Enhancement of Old Historical Document by Image Processing from Gray scale to RGB Scale Conversion

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Abstract: *The enhancement of historical documents through image processing stands as a pivotal bridge between the past and the present. In this project, we embark on a journey to rejuvenate these treasured artifacts by utilizing cutting-edge techniques. Central to this endeavor is the conversion of grayscale documents into the vibrant realm of RGB, breathing new life into their visual presentation. The Nonlocal Mean Denoising algorithm takes center stage, diligently removing noise while preserving the document's authenticity. Accompanied by image division code, we break down these historical scrolls and manuscripts into comprehensible segments, ensuring efficient processing without compromising their essence. At the heart of our methodology lies the profound significance of image histograms. Through these histograms, we delve into the intricacies of pixel intensities, unearthing valuable insights into the document's characteristics. The outcome of our rigorous efforts is a transformation of these historical gems, making them not only aesthetically pleasing but also accessible to a broader audience, fostering a deeper appreciation of our cultural heritage. As technology and history intersect in this project, we highlight the transformative potential of image processing in preserving and reinvigorating the stories of the past. In an age where the digital realm converges with the analog, this endeavor reiterates the importance of ensuring that history remains alive and tangible for generations to come.*

Keywords: Gray scale, Red Green Blue scale, Nonlocal Mean Denoising algorithm, Image Histogram

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