WATERMARKING APPLICATION ON DOCUMENTATION DATA USING THE SINGULAR VALUE DECOMPOSITION (SVD) ALGORITHM CASE STUDY: LENGKONG DISTRICT OFFICE, REGENCY. NGANJUK

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ABSTRACT

The increasing misuse of digital data creates serious challenges, especially in the documentation data of the Lengkong District Office, Nganjuk Regency. In this research, the author proposes and applies the Singular Value Decomposition (SVD) Watermarking method through a special application. The app allows users to choose invisible or visible watermarking, providing freedom regarding image visibility. The method used in the research includes collecting digital image data from the Lengkong District Office, Nganjuk Regency, followed by preprocessing the data to remove noise and improve image quality. Researchers then built an intuitive SVD watermarking application and chose the SVD algorithm to insert watermarks into digital images. Test results show satisfactory security, with a high PSNR value, indicating resistance to digital image changes. The conclusion of this research confirms that SVD Watermarking at the Lengkong District Office, Nganjuk Regency is an effective solution for protecting copyright of documentation data, with positive implications for the security and reliability of copyright.

Keywords: Digital Image, Watermarking, SVD, Copyright, Documentation Data