

Project Proposal

The project I am proposing is Digital Watermarking: Embedding and Extraction in Signal Processing. The main goal is to design and implement a digital watermarking system that can embed watermarks reliably using different watermarking algorithms. If possible, a secondary goal would be to remove watermarks from images, either from images we added one to or images that already have watermarks. The main tool that will be used is MatLab by using custom functions to handle the image processing, signal transformation, watermark embedding, and extraction. It will also images which will be obtained from online repositories or open datasets. The deliverables will be the code along with the custom functions used, MatLab plots and visualizations so that results can be verified, and a final report detailing more information. Some references that I will be using are:

Z. -X. Wang, K. -Y. Sha and X. -L. Gao, "Digital Watermarking Technology Based on LDPC Code and Chaotic Sequence," in IEEE Access, vol. 10, pp. 38785-38792, 2022, doi: 10.1109/ACCESS.2022.3166475.

He-Jing, Wu. "A DCT Domain Image Watermarking Method Based on Matlab." *International Journal of Advanced Network, Monitoring and Controls* 2.2 (2017): 38-45.

He-Jing, Wu. "A DCT Domain Image Watermarking Method Based on Matlab" *International Journal of Advanced Network, Monitoring and Controls*, vol.2, no.2, 2017, pp.38-45.
<https://doi.org/10.21307/ijanmc-2017-008>