

Research on applying GANs to enhance X-ray image quality for supporting pneumonia lesion segmentation

Pham Thi Phuong Thao

Abstract: In medical practice, processing and analyzing X-ray images is a crucial step in diagnosing pneumonia. This study focuses on researching the application of Generative Adversarial Networks (GANs) to improve the quality of X-ray images, thereby enhancing the accuracy of lesion segmentation. The objective of the study is to build and deploy a GAN-based system to provide technical support for doctors in detecting and evaluating pathologies related to pneumonia. The research methodology includes both a theoretical approach to GANs and experimentation with X-ray datasets. The expected results hold significant value in enhancing the diagnosis and treatment of pneumonia, while also contributing to the development of information technology in medicine.

Keywords: GANs, X-ray images, Lesion segmentation, Pneumonia, Information technology