

# Developing an Automated Synthetic Korean Painting Dataset Generation System for AI Training

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**Abstract**— This paper describes research on automatically generating training datasets to develop AI specialized for Korean paintings. The goal of our research is to use generative AI to generate synthetic Korean paintings while automatically labeling object areas within the paintings. In addition, we quantitatively evaluated the training dataset generated by the proposed system, and qualitatively evaluated the dataset by Korean traditional culture experts. Based on these experimental results, we suggest directions for future research and improvement.

**Keyword**—Data Generation, Auto Labeling, AI Art, Object Detection, Data Augmentation



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