

The convergence of artificial and human intelligence in art authentication: a perspective on machine learning applications

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The intersection of machine learning and art authentication has emerged as a transformative area within the field of art analysis. This paper explores the application of various machine learning techniques to enhance the efficiency of art authentication processes. Two procedures with potential use in the identification of forgeries are discussed. The supervised one uses attribution markers collected in an extensive analysis of paintings as input to a classification model. The resulting classifier should aid an art expert in the final assessment of authenticity. The unsupervised method is easier to carry out, as it does not require labeled training data. It may help to identify forged artworks as outliers in the dataset by measuring their similarities to authentic objects. The methods are tested on paintings attributed to M. Willmann and A. Grottger, respectively. Our findings open up new avenues for research and exploration at the intersection of the art world and machine learning. They also emphasize the importance of a collaborative approach that integrates traditional art historical expertise with advanced computational methods, thereby enriching the understanding of artworks and enhancing the efficacy of authentication practices.

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