

# Computer analysis verifies authenticity of Jackson Pollock's drip paintings

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Abstract expressionist painter Jackson Pollock was perhaps most famous for his "drip painting" technique. His legacy, however, is plagued by fake "Pollocks" and even experts often have trouble distinguishing the genuine from the counterfeit. Now, a machine vision approach described in a forthcoming issue of *International Journal of Arts and Technology* has demonstrated 93 percent accuracy in spotting true Pollocks.

Lior Shamir of Lawrence Technological University in Michigan, USA, was intrigued by the a revolutionary artistic style of dripping paint on a horizontal canvas and has turned to computational methods to characterize the low-level numerical differences between original Pollock drip paintings and drip paintings done by others attempting to mimic this signature style. A scan of a given painting is analyzed and 4024 numerical image descriptors extracted, Shamir explains. Among these descriptors are fractals formed by the movement of the dripping paint and features such as Zernike polynomials and Haralick textures.

"The human perception of visual art is a complex cognitive task that involves different processing centers in the brain," Shamir explains.

"The work of Jackson Pollock showed unique physiological and neurological human responses to Pollock's drip paintings." But, the human eye is limited in its perception of the specific physical qualities of a painting. A computer, on the other hand, can quantify the details at the pixel by pixel level once a painting has been digitized and "see" details and patterns that we do not consciously detect.

Shamir's analysis demonstrates that although any amateur might imagine they could copy Pollock's work, it is indeed unique and his signature style gave rise to specific features and textures that Pollock pretenders have repeatedly failed to emulate accurately. Shamir points out that his software is publicly available and could be used to analyze the work of other artists in verifying authenticity or revealing the fakes.

**More information:** Shamir, L. (2015) 'What makes a Pollock Pollock: a machine vision approach', *Int. J. Arts and Technology*, Vol. 8, No. 1, pp.1-10.

The software is available here: [vfacstaff.ltu.edu/lshamir/downloads/ImageClassifier](https://facstaff.ltu.edu/lshamir/downloads/ImageClassifier)

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