The researchers tested the method on a set of over 1,600 test images with overlapping shapes, emulating bloodstains (row a).
The new approach to identifying elliptical-shaped objects in complex images shows marked improvement over current methods. This is demonstrated using simulated data and biological data for which the underlying truth is known.

While these results are promising, there is currently no way to quantify the performance of these models for bloodstain pattern analysis. The paper shows that the new method seems to do well based on visual inspection.

The next stage of the research is to use the identified ellipses as summaries of the images that can be used to develop statistical methods for analyzing bloodstain patterns.

Access the full research study to learn more: forensicstats.link/EllipticalObjects

Additionally, explore relevant publications:
- Code Used for Developed Computational Method to Break Complex Images Down Into Clumps of Elliptical Objects: forensicstats.link/EllipticalObjectsComputationMethod
- Set of Microscopic Cell Images Dataset to Test Computational Method: forensicstats.link/NuclearSegmentationInCellImages
- Set of Bloodstain Patterns Dataset to Test Computational Method: forensicstats.link/DataSetOfBloodstainPatterns
- Automatic Classification of Bloodstain Patterns Caused by Gunshot and Blunt Impact at Various Distances: forensicstats.link/Bloodstain-Patterns-Various-Distances
- Determining the Region of Origin of Blood Spatter Patterns Considering Fluid Dynamics and Statistical Uncertainties: forensicstats.link/Blood-Splatter-Fluid-Dynamics

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