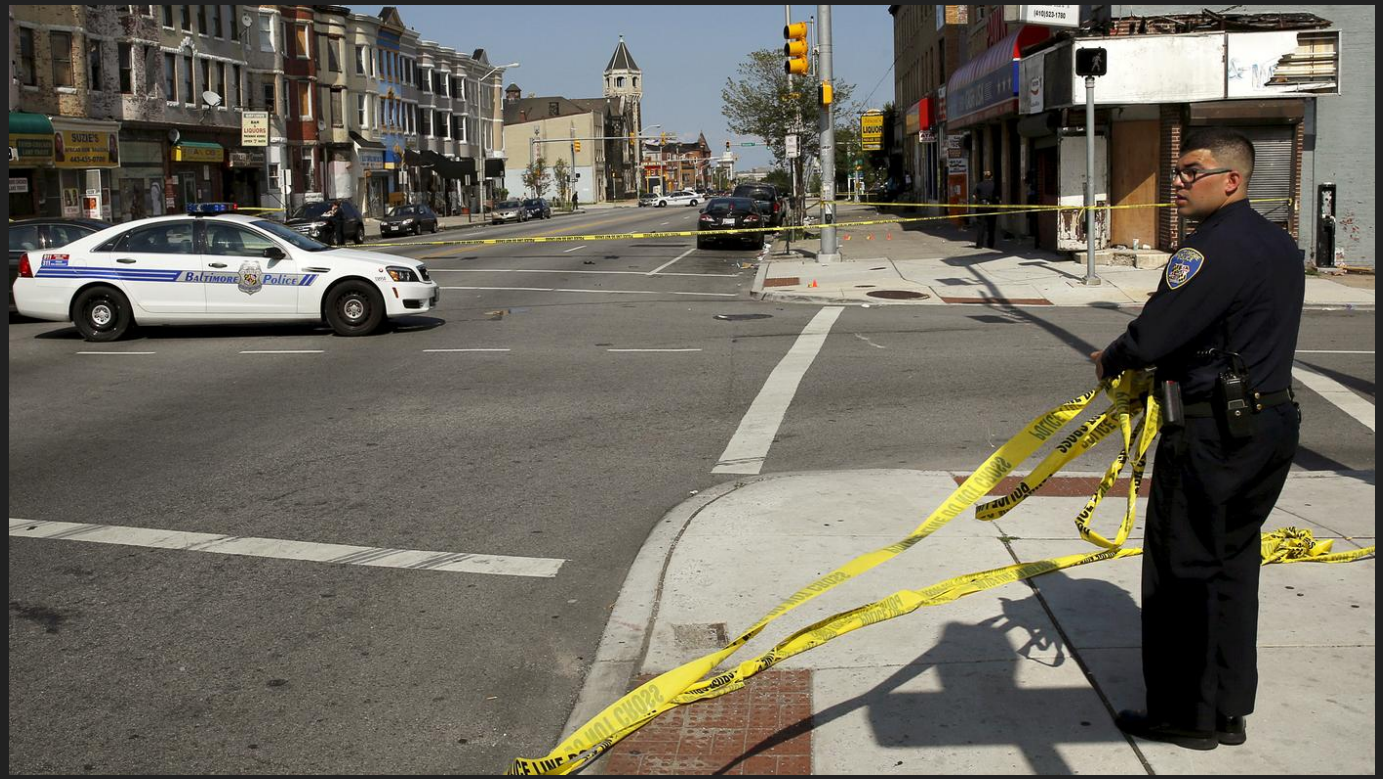
SplatteRed

Andrew Zysk


SUZIE'S
BALTIMORE Police
POLICE LINE DO NOT CROSS

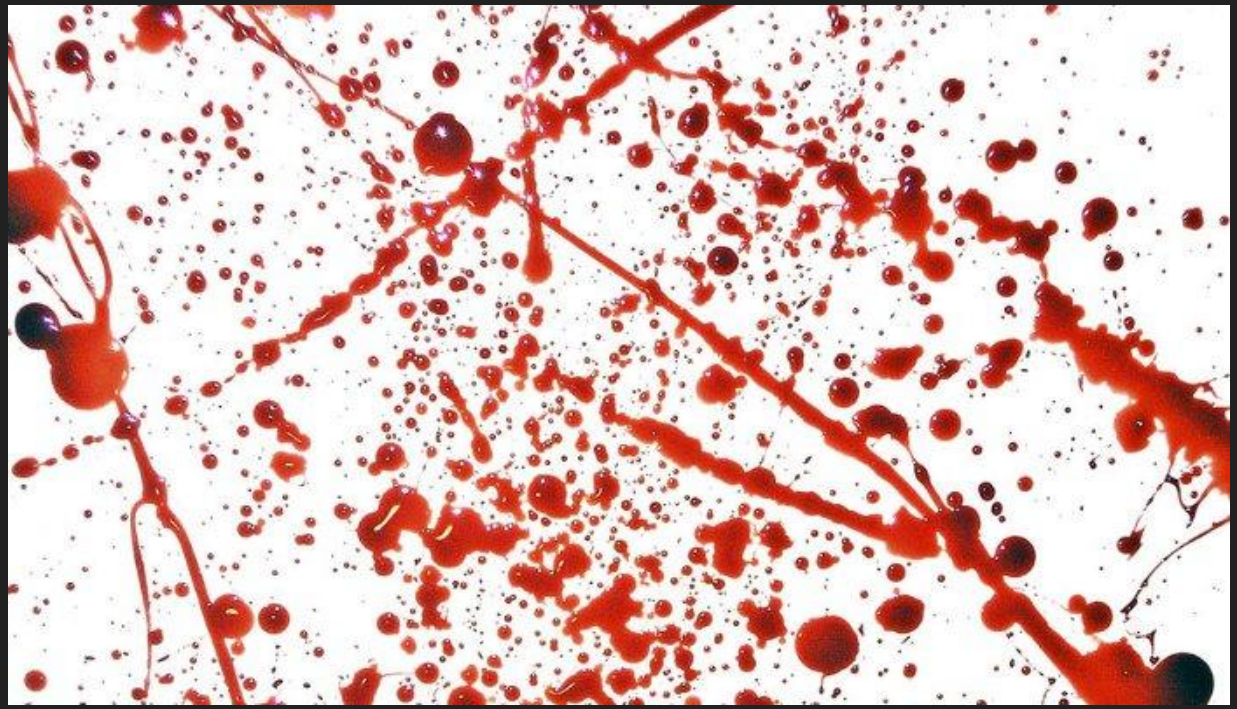
Detective Jimmy McNulty, Baltimore City Police Department Homicide Unit

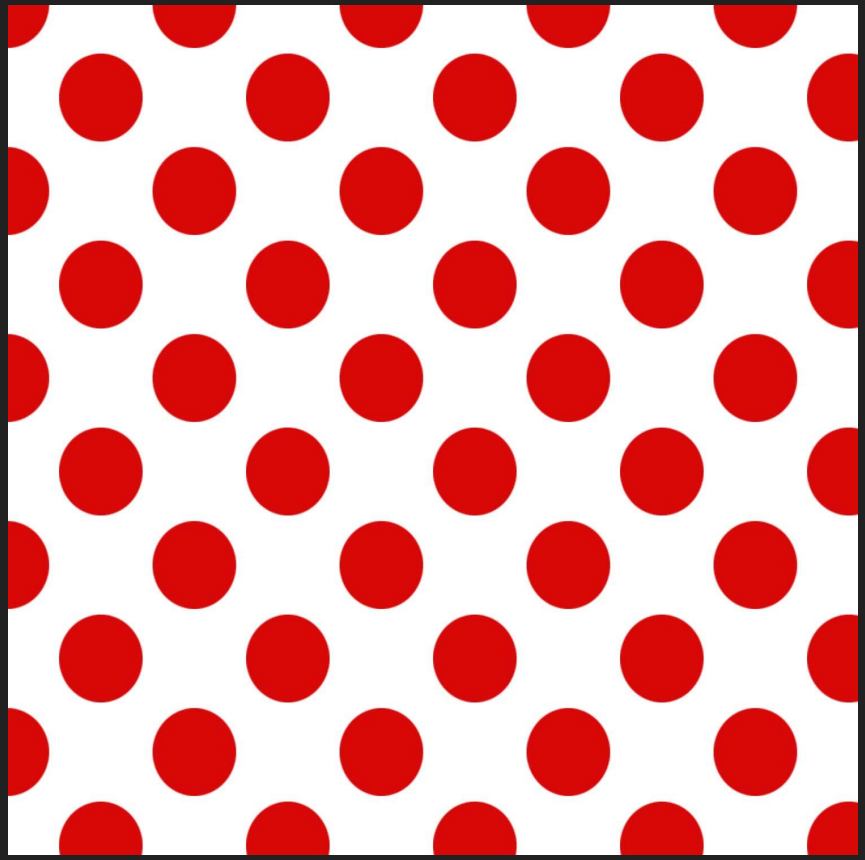

McNULTY

1000+

1000+

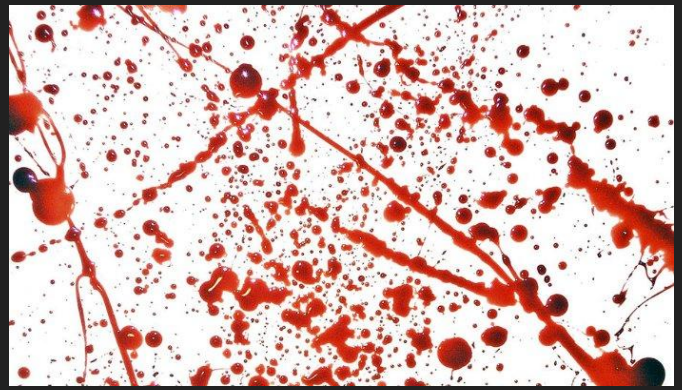
1000+

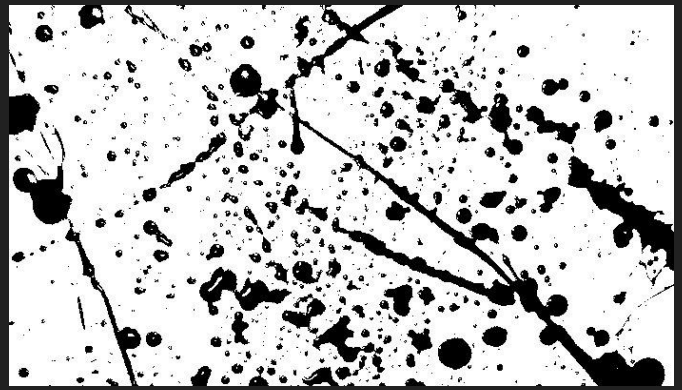




THRESHOLDING

Threshold: target RGB range



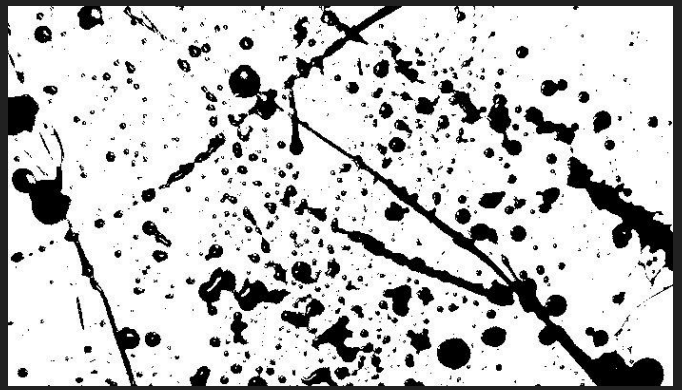


Source Image

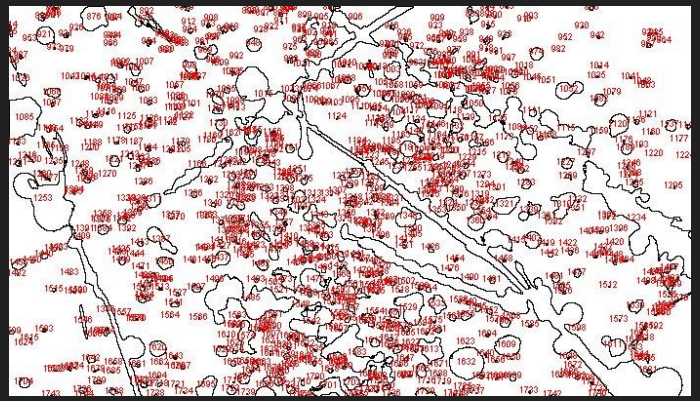
Mask Image

SEGMENTATION

Segment: contiguous set of thresholded pixels



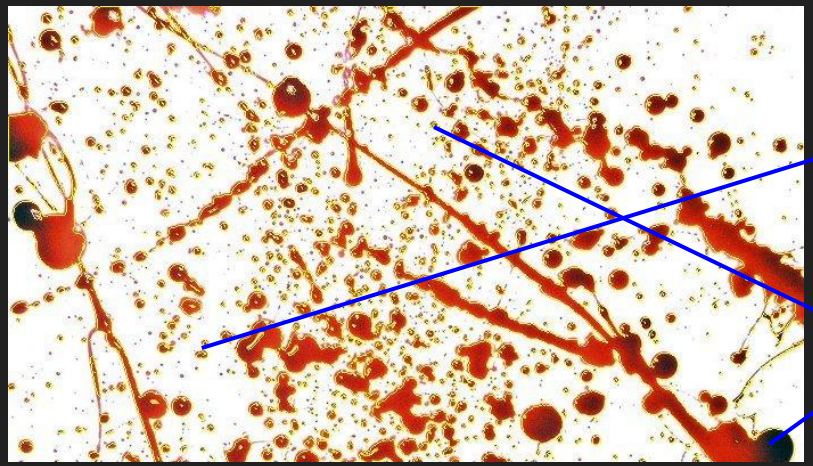
Mask Image



Labeled Segments

ATTRIBUTION

Attribute: calculated quantitative value from a segment



Source Image + Labeled Segments

Label	Id	Area	Height	Width	Perimeter
25	7638	0	1	5	5
25	7639	1	2	4	3
25	7640	2	32	1190	204
25	7641	3	2	2	1
25	7642	4	1	1	1
25	7643	5	1	1	1
25	7644	6	1	1	1
25	7645	7	1	1	1

Segment Attribute Table

Label	Id	Area	Height	Width	Perimeter
25	7638	0	1	5	5
25	7639	1	2	4	3
25	7640	2	32	1190	204
25	7641	3	2	2	1
25	7642	4	1	1	1
25	7643	5	1	1	1
25	7644	6	1	1	1
25	7645	7	1	1	1

Segment Attribute Table

↓

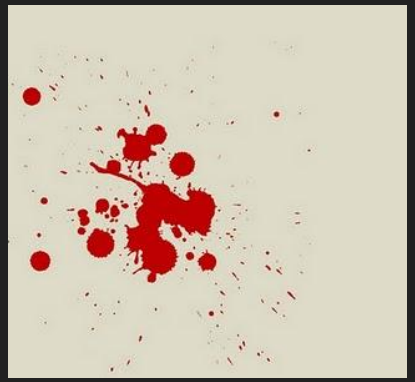
Database

1000+ training set

MACHINE LEARNING

Images are classified according to their attributes

Not Blood



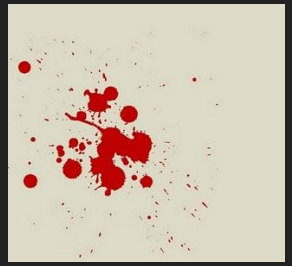
Blood

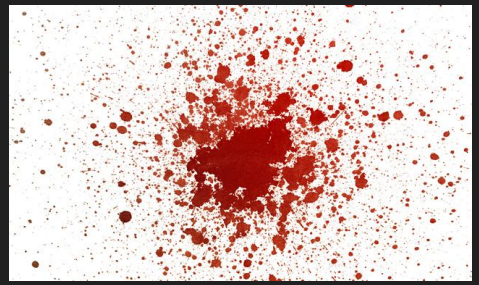
MACHINE LEARNING: Choosing Attributes

Logistical	Domain-Direct
• Relative Mean X • Relative Mean Y • Relative Area • Segment Count	• Convexity • Circularity • Std. Dev. of R value • Mean R value

MACHINE LEARNING: Choosing Attributes

Logistical	Domain-Direct
• Relative Mean X	• Convexity
• Relative Mean Y	• Circularity
• Relative Area	• Std. Dev. of R value
• Segment Count	• Mean R value





THANK YOU