



Title: Image segmentation with k-means and color-manipulation techniques for the identification of corrosion patterns

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a)



b)

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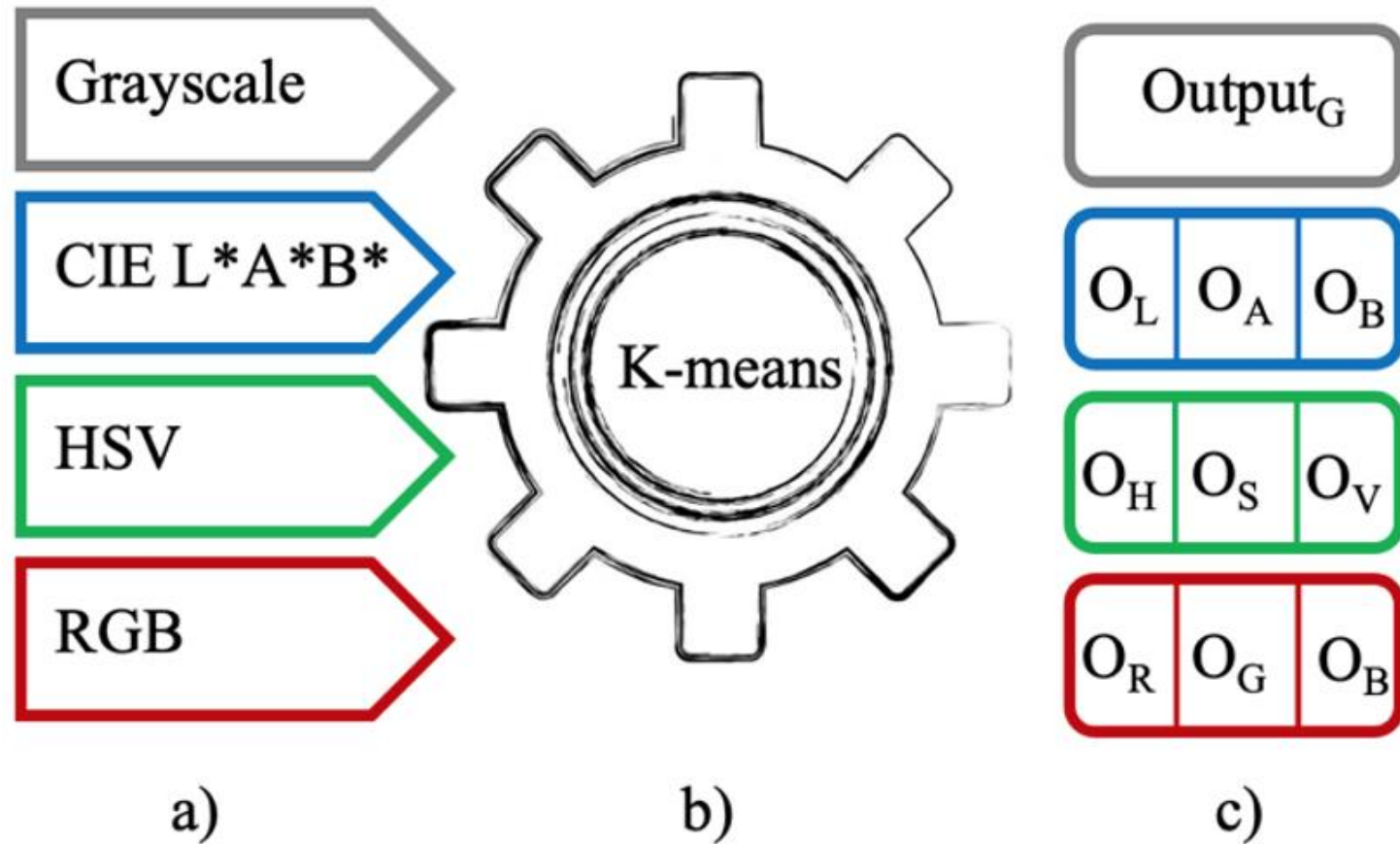
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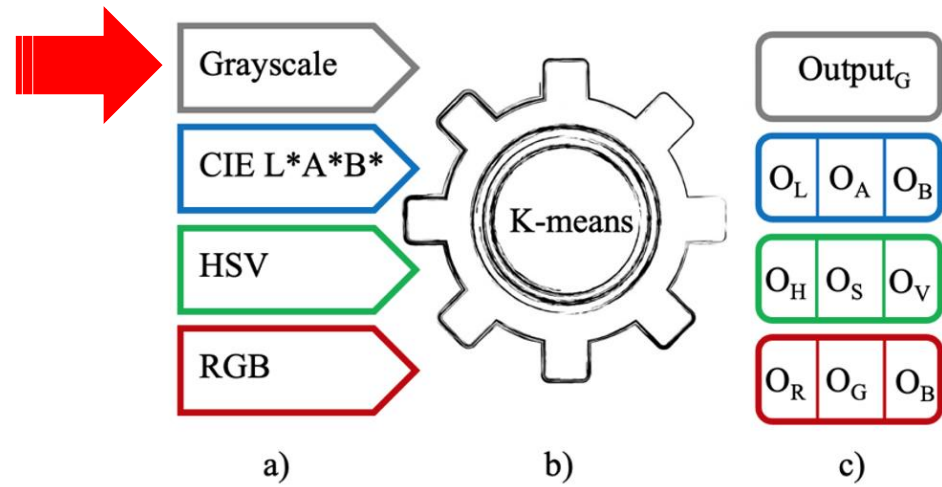
References



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a)

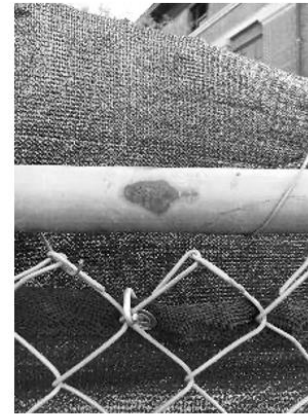
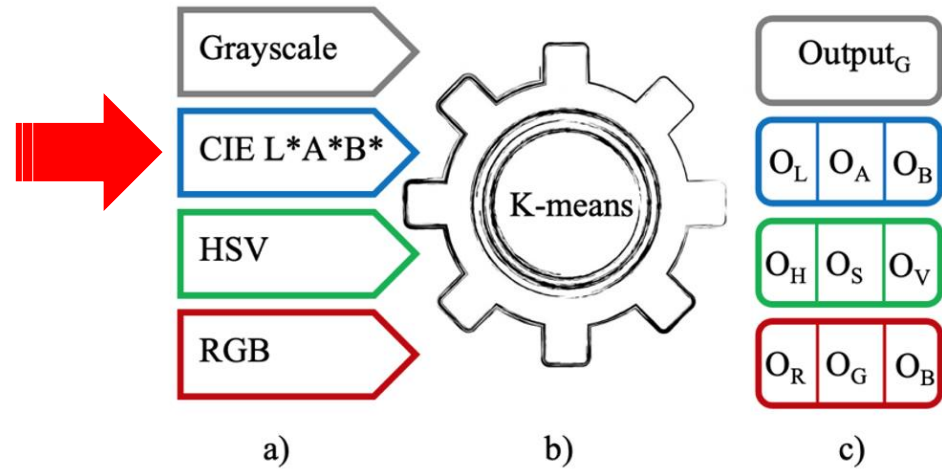
b)



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a) L*



b) A*



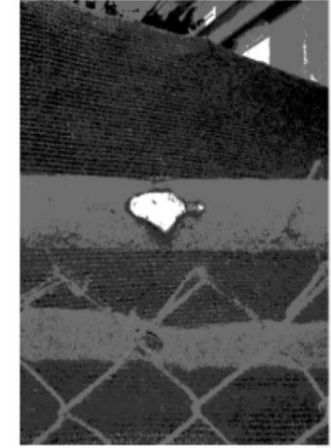
c) B*



a) L*



b) A*



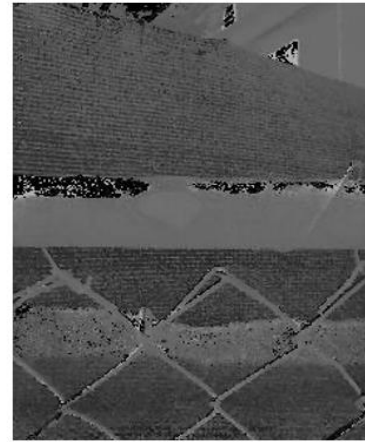
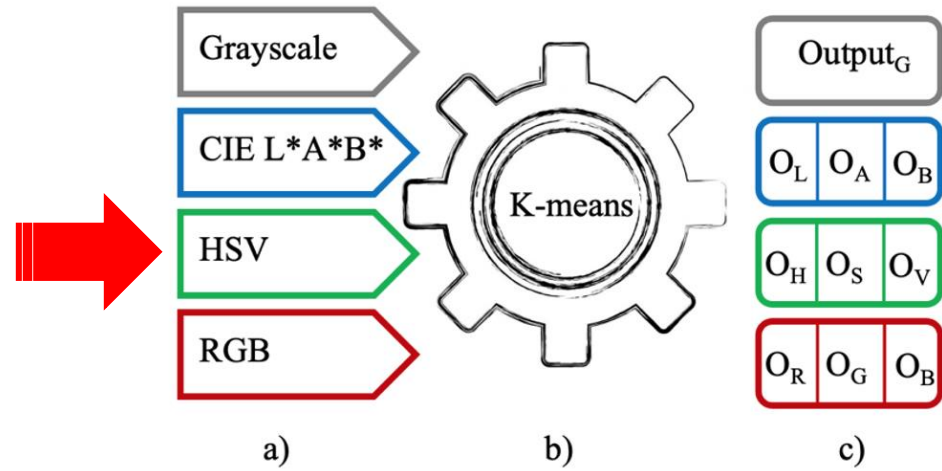
c) B*



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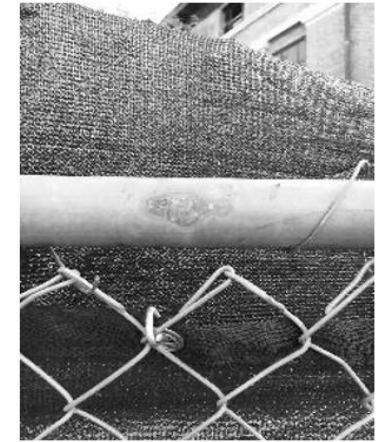
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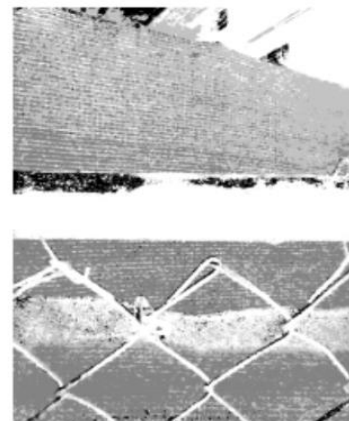
a) H



b) S



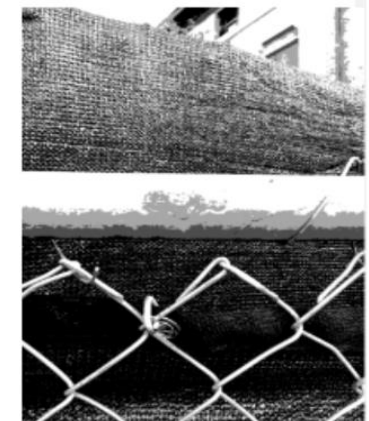
c) V



a) H



b) S



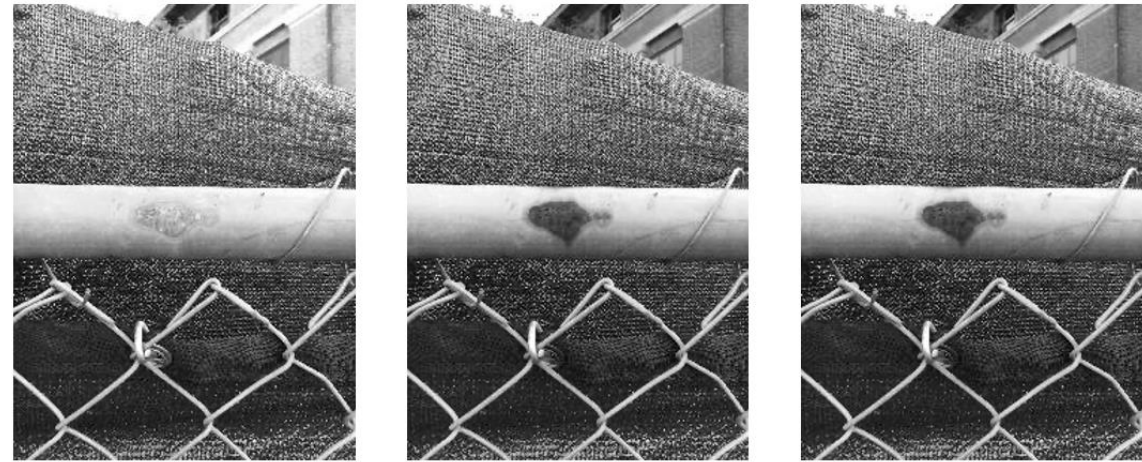
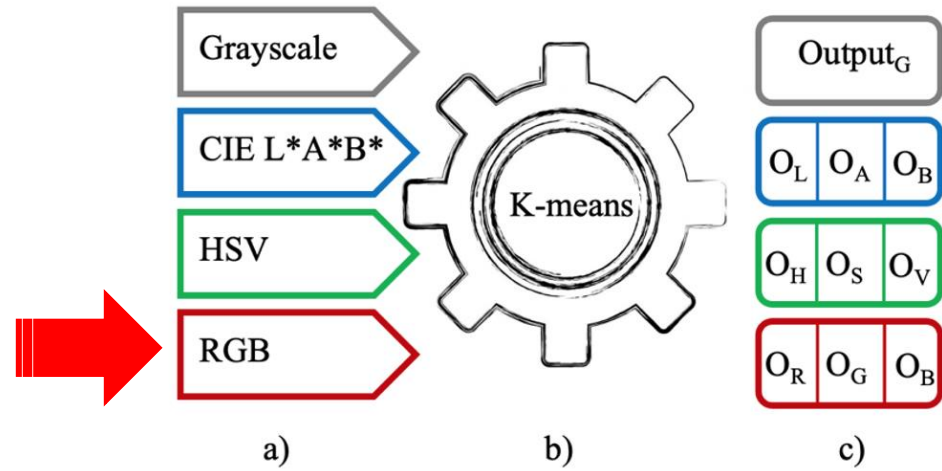
c) V



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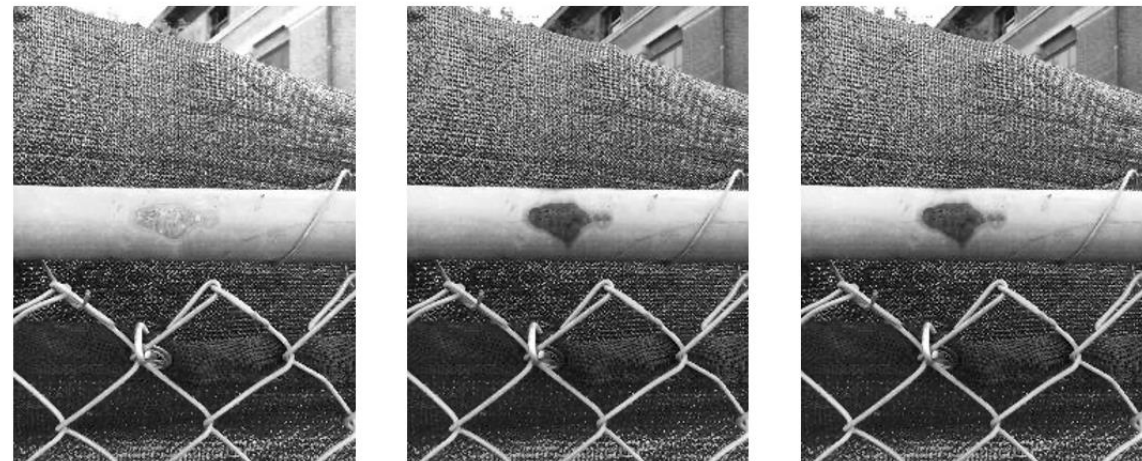
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a) R

b) G

c) B



a) R

b) G

c) B

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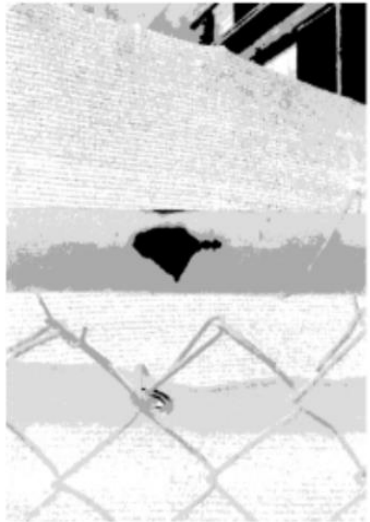


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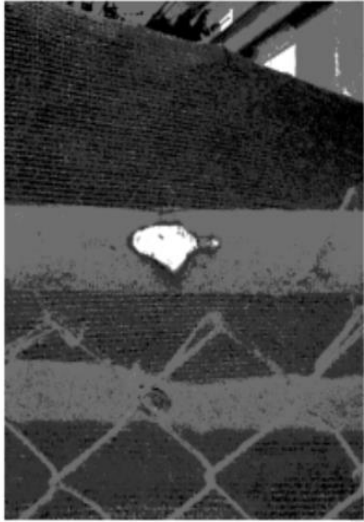
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The experimental results obtained with the test image show that the techniques that provide a better definition of the corroded area are the CIE L*A*B* and HSV techniques.



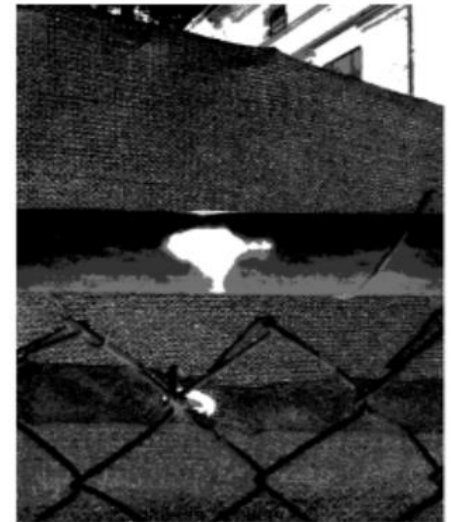
b) A*



c) B*



A* contains the green and red color information, and B* contains the blue and yellow color information.



b) S

S is the Saturation Value.

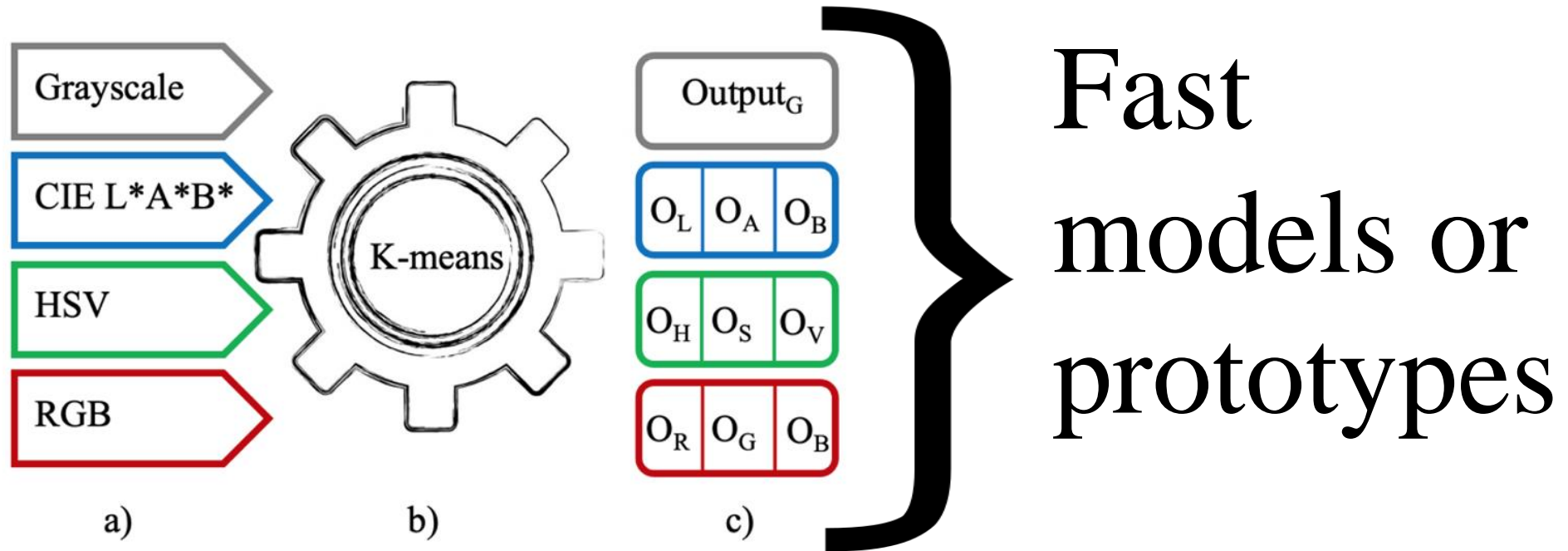


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This methodology expands the opportunities and fast models or prototypes that can be presented to experts for decision-making.



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