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Using a naive bayesian classifier to count colonies of bacteria

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Counting colonies of bacteria can be a tedious and difficult task if it is done by hand. MATLAB and machine learning tools may Callow the process to be automated. One challenge to automating the process is ensuring that clusters are not counted. In this project, *MATLAB's Image Toolbox* and *R library* were used to train a system to count non-clustered colonies. Images simulating real images were used in order to train the system. MATLAB was used to get region properties, such as eccentricity, axis length and perimeter, for each object in a series of training images. Those properties were then tested in Weka to determine a suitable classifier to identify non-clustered colonies. The *Naïve Bayesian Classifier* was selected and applied to predict the classification results in new images.

Biography

Maria Muradas-Lopez has completed his Ph.D. at the age of 25 years from Andhra University and postdoctoral studies from Stanford University School of Medicine. He is the director of a premier Bio-Soft service organization. He has published more than 25 papers in reputed journals and has been serving as an editorial board member of repute.

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