



## UNSUPERVISED LEARNING FOR RIPENESS ESTIMATION FROM GRAPE SEEDS IMAGES

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*Abstract- Estimating the current stage of grape ripeness is a crucial step in wine making and becomes especially important during harvesting. Visual inspection of grape seeds is one method to achieve this goal without performing chemical analysis, however this method is prone to failure. In this paper, we propose an unsupervised visual inspection system for grape ripeness estimation using the Dirichlet Mixture Model (DMM). Experimental analysis using real world data demonstrates that our approach can be used to estimate different ripeness stages from unlabeled grape seeds catalogs.*

**Index terms:** Mixture model, grape ripening, computer vision.