Title:Exploring the Effect of Balanced and Imbalanced Multi-Class Distribution Data and Sampling Techniques on Fruit-Tree Crop Classification Using Different Machine Learning Classifiers

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Main points to notice:

- Less accuracy 71%

Our target:

- Increase accuracy

Summary:

The research paper investigates the use of remote sensing technology and machine learning algorithms to map fruit-tree crops and co-existing land use types in South Africa. The study evaluates the influence of balanced and imbalanced multi-class distribution and data-sampling techniques on fruit-tree crop detection accuracy. The results show that the support vector machine (SVM) algorithm produced the highest classification

accuracy of 71% compared to other algorithms. The paper highlights the importance of variable selection and the significance of Sentinel-2 bands in discriminating crop classes. Additionally, the study discusses the implications of the findings for mapping fruit-tree crops in heterogeneous horticultural landscapes and emphasizes the potential of Sentinel-2 data in providing valuable information for crop management and precision agriculture. The paper concludes by highlighting the importance of data sampling and appropriate classification algorithms for accurately mapping fruit trees in complex agricultural landscapes.