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26th International Conference on Computer and Information Technology : Submission (315) has been created.

1 message

Microsoft CMT <email@msr-cmt.org>

Tue, Sep 5, 2023 at 11:45 PM

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Hello,

The following submission has been created.

Track Name: ICCITconf2023

Paper ID: 315

Paper Title: DeepLeaf: Advanced Leaf Counting for Agricultural Applications Using Deep Learning

Abstract:

In this study, we delve into the task of quantifying the number of rosette leaves within RGB images, which is a critical aspect of plant phenotyping. Our approach is rooted in data-driven methodologies that transcend various plant species and imaging configurations. To tackle this challenge, we leverage cutting-edge deep learning models, employing a de-cnn for initial segmenting and a CNN for leaf counting. We evaluate our method using our dataset CVPPP-2017, which presents a relatively limited number of training examples compared to standard deep learning image datasets. Nevertheless, we manage to achieve commendable results in terms of both leaf segmentation and leaf counting through straightforward data augmentation techniques. Furthermore, we conduct a comparative analysis against methods previously assessed on competition datasets. Our approach demonstrates an average mean and (SD) standard deviation of absolute count difference of 1.62 and 2.30, respectively, across all those five test datasets.

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Primary Subject Area: Artificial Intelligence

Secondary Subject Areas: Not Entered

Submission Files: 2023_Summer_CSE_348_DeepLeaf__Advanced_Leaf_Counting_for_Agricultural_Applications_Using_Deep_Learning.pdf (191 Kb, Tue, 05 Sep 2023 17:44:35 GMT)

Submission Questions Response: Not Entered

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