PLANTHEALTH

PLANTHEALTH

ABSTRACT

One of the major difficulty encountered in plant disease epidemiology is the lack of occurrence data. Large-scale and sustainable monitoring efforts are penalized by the lack of experts and the difficulty of diagnosing plant diseases for non-experts. In this context, crowdsourcing plant observation tools (such as Pl@ntNet) could serve as a brave new monitoring methodology. Even if non-healthy plants remain a relatively rare event in such high-throughput image data stream, the number of occurrences might be sufficiently high for several monitoring scenarios. Now, automatically recognizing plant diseases in such crowdsourced image streams is a challenging computer vision problem because of the scarcity of the training data, the low inter-class variability and the rarity of the events. The original approach that we propose to solve these issues is to rely on transfer learning and pro-active learning solutions as a way to set up an innovative and participatory citizen sciences program.

The research work will be implemented by a post-doctoral fellow (18 months) who will be hosted 3 days a week in AMAP unit and 2 days a week in LIRMM.

Keywords : 1. Exclu de la photothèque

Year : 2016
Project number : 1604-019
Type of funding : AAP
Project type : AAP INTERLABEX
Research units in the network :
Start date : 2018-01-08
End date : 2019-07-15
Flagship project : no

Project leader : Pierre Bonnet Alexis Joly Sylvie Blangy
Project leader's institution : CIRAD
Project leader's RU : AMAP

Budget allocated : 90000 €
Total budget allocated (including co-financing) : 90000 €
Funding : Labex