Literature Review of Applying CNNs for Plant Disease Detection

Scott Hootman-Ng

***Abstract*—This review will look at recent advances in Convolutional Neural Networks (CNNs) for classifying different plant diseases from images of plant matter. We will discuss error metrics and contemporary model performance, the general outline of how the CNN works in this context and some potential difficulties to consider implementing them for this purpose.**

***Index Terms*—Convolutional Neural Netowrk, CNN, Plant Disease Detection**

I. Introduction

PLANT disease detection is a very important ability for many contemporary businesses. From personal home gardening to large scale farming complexes, being able to pinpoint and diagnose plant diseases has the ability to save large sums of money for both the individuals and farmers at large. Using machine learning to take over this task can be a giant boon for both. In particular, as we will be using image files to actually do the diagnosis, convolutional neural networks can go a long way to this end by using the convolutional scanners and pooling to isolate potential areas of disease rather efficiently. We will look at more specific architectures, accurate error metrics and what is a good accuracy in contemporary implementations of these types of models in this context.

II.

III. Conclusion

The conclusion goes here.

References

[1] H. Kopka and P. W. Daly, *A Guide to LaTeX*, 3rd ed. Harlow, England: Addison-Wesley, 1999.