

Abstract Submitted
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Seedling Detection in a Flatbed Scanner Image Acquisition System for Plant Growth Studies¹ BRAD R. HIGGINS², TESSA DURHAM BROOKS³, CHRISTOPHER D. WENTWORTH⁴, Doane College, Crete, NE — Recent plant genome studies have made use of a low cost flatbed scanner image acquisition system to obtain a large number of image sequences showing growth of seedlings. This system has generated a significant database of images for growth studies of the model plant *Arabidopsis thaliana* with varying genetic and environmental conditions. Analysis of image sequences must be automated due to the very large number of images that need to be studied. We have developed a processing algorithm and code that can identify individual seedlings and track them over time in a scanner image sequence. Our code can also remove unused parts of the image thereby saving hard drive storage requirements for the image database. The code was developed in Python using functions from the open source image processing library OpenCV. The code is available under an open source license.

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