

Orange Detection Algorithm

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Abstract—This document is a model and instructions for \LaTeX . This and the `IEEEtran.cls` file define the components of your paper [title, text, heads, etc.]. *CRITICAL: Do Not Use Symbols, Special Characters, Footnotes, or Math in Paper Title or Abstract.

Index Terms—Image Processing, Fruit, Applied image colour segmentation, Automated counting

I. INTRODUCTION

Counting and identifying the number of ripe fruits is important to automate harvesting fruits when they are ripe and to identify how many ripe fruits there are on a tree.

II. EASE OF USE

A. *How we Selected the threshold vales*

III. ALGORITHMS

A. *Values*

B. *Stages*

1) *Step 1:* Run NDI

2) *Step 2:* In the RGB colour space run a mean filter.

3) *Step 3:* convert the image to the YCrCb colour space.

run a threshold on the Cr values. how the threshold is discusses in sec. III-A.

4) *Step 4:* run a threshold on the Cb values. how the threshold is discusses in sec. III-A.

Then do a bit-wise and to create a mask

$$pixel_{final} = pixel_{NDI} \wedge pixel_{mean} \wedge pixel_{Cr} \wedge pixel_{Cb} \quad (1)$$

5) *Step 5:* Do a circle count on the mask image

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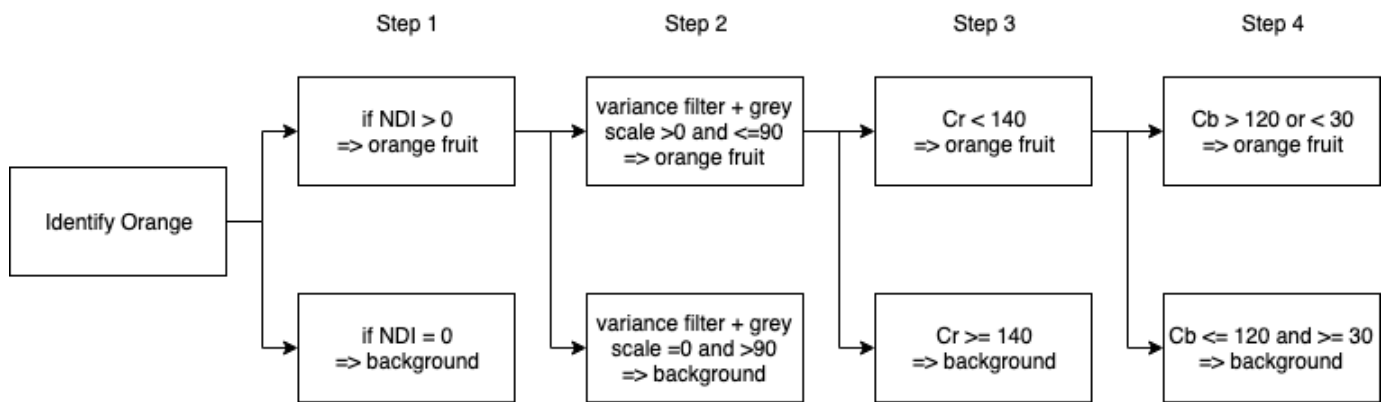


Fig. 1. Outline of the process of the stages of the algorithm