VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI - 590018

A PROJECT REPORT ON

"DETERMINATION OF FRESHNESS AND ARTIFICIAL RIPENING OF FRUITS"

Submitted in partial fulfillment of the award of Degree of

BACHELOR OF ENGINEERING

in

COMPUTER SCIENCE AND ENGINEERING

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CERTIFICATE

This is to certify that the Project work entitled "**DETERMINATION OF FRESHNESS AND ARTIFICIAL RIPENING OF FRUITS** " has been successfully completed by

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The bonafide students **of Department of Computer Science and Engineering, Alva's Institute of Engineering and Technology** in partial fulfilment of the requirements for the award of **BACHELOR OF ENGINEERING** in **DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELGAUM** during the year **2019-2020**. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the library. The project report has been approved as it satisfies the academic requirements in respect of project work prescribed for the said Degree.

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ABSTRACT

Ripening of fruit is a natural process. Ethylene is responsible for ripening process which is produced naturally in fruit. But dealers and sellers often use chemicals like CaC2 (Calcium carbide) to quicken this process so their product will enter the market early and they can maximize profit. Fruits are kept in storage with chemicals. This chemical mixes with moisture and produces ethylene which causes ripening of the fruit. Since the ethylene is high in quantity and it contacts with the surface area of the fruit. It causes uniform ripening of the fruit unlike when the fruit is ripened naturally, it causes uneven ripening of the fruit since natural ethylene present in the fruits and it is un-uniformly distributed. Consuming such fruit is harmful to human health. It can cause headache, stomach irritation, throat irritation, digestion problem and since the chemical used is carcinogenic, it can also cause cancer and it also degrades the taste and quality of the fruit. Finding out the artificially ripened fruit with the human eye is difficult. So, the proposed system gets an image of fruit under the test and compare it with the features of naturally ripened fruit and artificially ripened fruit and give the output with the accuracy of the fruit ripeness. This method makes usage of smartphone which runs the android application and the convolutional neural network to detect the artificially ripened fruit.