VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama" Belagavi – 590010

Project Report on

"DESIGN AND IMPLEMENTATION OF AUTOMATED HYDROPONIC SYSTEM"

Submitted in partial fulfillment of the requirements for the award of degree

BACHELOR OF ENGINEERING
IN
ELECTRONICS & COMMUNICATION ENGINEERING

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CERTIFICATE

*Certified that the project work entitled "***DESIGN AND IMPLEMENTATION OF AUTOMATED HYDROPONIC SYSTEM***" is a bona fide work carried out by*

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in partial fulfillment for the award of **BACHELOR** OF ENGINEERING in **ELECTRONICS & COMMUNICATION ENGINEERING of the VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2020–2021. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the Bachelor of Engineering Degree.

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ABSTRACT

Traditional farming requires large amount of water for irrigation, and the pesticides used are polluting the soil and water bodies too. In addition to this, the rapid industrialization and urbanization have severely affected the resources like land, water and soil fertility. Climate change has had a disastrous impact on the growth of plants and vegetables. This can be controlled by an alternative method called hydroponics. Hydroponics is the method of growing plants in a soilless medium.

This method is preferable as the plant production and yield is very high, and the plants need to be sparingly watered. The growing roots get the nutrients readily as they are submerged in a nutrient-rich pool. The plants grow comparatively faster. The chances of being infected by pests and bacteria from the soil can be eliminated. The human intervention can be kept at minimum by automating the system, by the help of microcontrollers and sensors. The monitoring and control of the system can be done using Internet of things (IOT). Sensors like temperature, pressure, humidity, electrical conductivity can be used in order to grow the plants in a controlled environment.