VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama" Belagavi – 590 010

PROJECT REPORT ON

"MONITORING OF HONEY BEE HIVING SYSTEM USING SENSOR NETWORKS "

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 "***MONITORING OF HONEY BEE HIVING SYSTEM USING SENSOR NETWORKS***" 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 2019–2020. 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

Honey bees have throughout history been a keystone species, pollinating an estimated 70 percent of all plants and underpinning some 30 percent of the global food supply. Because the viability of beehives is a critical predictor of the planet's future health and agricultural sustainability, reports of a precipitous decline in the number of colonies around the world have stirred considerable alarm. Since most of the prior contributions are focusing on data gathering, the approach to focus on the user's needs is central to take next steps in the field of using sensors for Beekeeping.

Beekeepers can be divided into beekeepers having bees as a hobbies and beekeepers that are professional, making a living of the beekeeping. Visualization and availability of data are key questions for user friendliness. Since there are no standards for measurement data from beehives, there are different manufacturers/contributors that have their own system. If a standard format would be available, it would make it easier to interconnect different devices for visualization in single user interface. If data is available as streams in standardized application program interface (API) a user can use whatever solution found for visualization. The majorities of beekeepers that non-professional, they will probably want to have the "relation to their bees", using too much technology is probably wanted, like having robots doing the actual beekeeping work.