VISVESVARAYA TECHNOLOGICAL UNIVERSITY

Belagavi – 590 010

PROJECT REPORT
ON

"AUTOMATED FOOD SERVING ROBOT"

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 "AUTOMATED FOOD SERVING ROBOT" *is a bonafide 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 2015–2016. 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.

26/05/16

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ABSTRACT

The International Federation of Robotics (IFR) has proposed a tentative definition: "A service robot is a robot which operates semi- or fully autonomously to perform services useful to the well-being of humans and equipment, excluding manufacturing operations". Robotic systems perform many functions such as repetitive tasks performed in research. These range from the multiple repetitive tasks made by gene samplers and sequencers, to systems which can almost replace the scientist in designing and running experiments, analyzing data and even forming hypotheses.

The main aim of the project is to design a Robot that delivers the food from the main counter to the customer's table in a restaurant. This is essential in order to increase the efficiency of food serving to customers. In other words, it decreases the waiting time during peak hours. The smart menu card provided on each table allows the customer to order the food items conveniently. The robot uses a PIC microcontroller to run a program with a combination of RFID technology, Zigbee transceivers and gear handler. The RFID reader is fixed on the robot itself, and reads the RFID passive tag which is placed beside the serving tray. The robot will move to the respective table based on the order received. A simple gear mechanism is designed for holding up the tray so that it can carry the food to the customer's table. The main difference in the design of this serving robot as compared to the previous research is the application of RFID technology. The RFID application allows the robot to identify the right table that is to be served.