VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama" Belagavi – 590 010

PROJECT REPORT ON

"BORDER SECURITY ROBOT USING RASPBERRY PI"

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 "**BORDER SECURITY ROBOT USING RASPBERRY PI**" 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 2017–2018. 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.

Shetty 24/05/2018

D.V. 24/05/18

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ABSTRACT

Border areas pose a great challenge to soldiers. Apart from their duty to defend the enemy, they have to struggle a lot to resist the extreme weather conditions in those regions. Soldiers face fatigue dues to continuous monitoring of border regions. To overcome these problem an intelligent war field robot using raspberry pi is used for capturing the image of intruders across the borders and fire the enemies if they try to cross the border. This project aims at providing an aid to this problem by replacing soldiers with this system.

The system utilizes infrared sensors and raspberry pi camera. Infrared sensors detect the object and the robot moves in the direction of the object. Raspberry pi camera is used for continuous monitoring of the real time scenario and sends the data to raspberry pi. The raspberry pi compares the captured images with the images stored in the database. The images are compared by using haar-cascade technique. If the detected intruder is an enemy then the system fires against the enemy using the gun. This project will not fully remove responsibility of soldiers but shares maximum responsibility and will reduce human causalities on the border.