

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY**

**“Jnana Sangama” Belagavi – 590010**



**PROJECT REPORT ON**

**“DESIGN AND IMPLEMENTATION OF IMAGE  
PROCESSING BASED MILITARY SURVEILLANCE”**

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

**BACHELOR OF ENGINEERING  
IN  
ELECTRONICS & COMMUNICATION ENGINEERING**

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**DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING**

**ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY**

**MOODBIDRI – 574 225.**

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# ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

MOODBIDRI – 574 225

(Affiliated to VTU, BELAGAVI)

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

## CERTIFICATE

*Certified that the project work entitled "Design and Implementation of Image processing based military surveillance" is a bona fide work carried out by*

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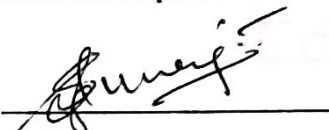
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in partial fulfillment for the award of BACHELOR OF ENGINEERING in ELECTRONICS & COMMUNICATION ENGINEERING of the VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI during the year 2020-2021. It is certified that all corrections/suggestions indicated 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

Face recognition has a wide range of possible applications from person identification and surveillance to electronic marketing and advertising for selected customers. In facial recognition, there are different steps such as preprocessing, feature extraction and classification where feature extraction and classification are used to obtain maximum accuracy. In this research paper, different feature extraction techniques such as ASM, AAM, Gabor features, Template based, and several are critically reviewed. Apart from these, the different types of neural classification networks such as convolutional, back propagation, radial basis function etc. in the domain of facial recognition are explored. The methods and algorithms developed in the current literature are studied and it is revealed that all the techniques are unique and have optimal performance. This research further makes a comparative analysis of these techniques based on their advantages and limitations.

Authenticating user is the important aspect in ATM security. Password is most important thing to provide security in any system password having two way first is text way and second is graphical way. We proposing both security feature text base word and graphical password graphical password include face recognition for detect the face but it is second process .The first process is text password which include random number. We design this system to minimize the shoulder surfing attack with the help of random keypad and face recognition method. It works as ATM system this type of keypad more powerful as compare to normal keypad.