INFRA RED SENSOR AND FINGER PRINT SENSOR FOR SECURITY BASED ELECTRONIC VOTING MACHINE USING RASPBERRY PI

A PROJECT REPORT

SUBMITTED BY

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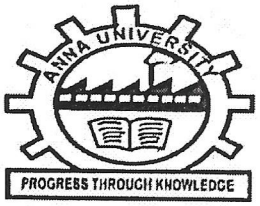
In partial fulfilment for the award of the degree of

BACHELOR OF ENGINEERING

In

ELECTRONICS AND COMMUNICATION ENGINEERING

T.J.S ENGINEERING COLLEGE, PERUVOYAL, CHENNAI



ANNA UNIVERSITY ; CHENNAI 600 025

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BONAFIDE CERTIFICATE

Certified that the project report "INFRA RED SENSOR AND FINGER PRINT SENSOR FOR SECURITY BASED ELECTRONIC VOTING MACHINE USING RASPBERRY PI " is the bonafide work of the following students.

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Who carried out the project work under my supervision

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Submitted for viva voce held on 22-06-2022

INTERNAL EXAMIER

EXTERNAL EXAMIER

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ABSTRACT

The main idea behind the work is to reduce the defrauding of manual voting system which includes many steps for verification to ensure the reliability of the device. In recent times the vote casting process became held with the manually running machines or even through message where as digital balloting device is a individual and unique concept which saves a time and avoids the fake balloting through a false person on the machines the voter need to apply his finger pattern to ballot to attest vote. "Vote from Anywhere" this scheme of advanced technologies enables everyone to take their right to vote. Details with respect to the number of citizens presented in the balloting set are saved in a list. The idea behind this scheme has an identical privilege of voter rejection. The EVM is based on the fingerprint and facial recognition has been researched the longest period and shows the most promising future in real world application. Because of their uniqueness and consistency over time, fingerprint and facial recognition have been used for identification over time by using this feature voting system can be made more secured. EVM is faster, efficient, reliable and error free, also easy to operate which reduces the chances of errors.

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EC8391 CONTROL SYSTEMS ENGINEERING **L T P C**
3 0 0 3

OBJECTIVES:

- To introduce the components and their representation of control systems
- To learn various methods for analyzing the time response, frequency response and stability of the systems
- To learn the various approach for the state variable analysis.

UNIT I SYSTEMS COMPONENTS AND THEIR REPRESENTATION **9**

Control System: Terminology and Basic Structure-Feed forward and Feedback control theory Electrical and Mechanical Transfer Function Models-Block diagram Models-Signal flow graphs models-DC and AC servo Systems-Synchronous -Multivariable control system

UNIT II TIME RESPONSE ANALYSIS **9**

Transient response-steady state response-Measures of performance of the standard first order and second order system-effect on an additional zero and an additional pole-steady error constant and system- type number-PID control-Analytical design for PD, PI,PID control systems

UNIT III FREQUENCY RESPONSE AND SYSTEM ANALYSIS **9**

Closed loop frequency response-Performance specification in frequency domain-Frequency response of standard second order system- Bode Plot - Polar Plot- Nyquist plots-Design of compensators using Bode plots-Cascade lead compensation-Cascade lag compensation-Cascade lag-lead compensation

UNIT IV CONCEPTS OF STABILITY ANALYSIS **9**

Concept of stability-Bounded - Input Bounded - Output stability-Routh stability criterion-Relative stability-Root locus concept-Guidelines for sketching root locus-Nyquist stability criterion.

UNIT V CONTROL SYSTEM ANALYSIS USING STATE VARIABLE METHODS **9**

State variable representation-Conversion of state variable models to transfer functions-Conversion of transfer functions to state variable models-Solution of state equations-Concepts of Controllability and Observability-Stability of linear systems-Equivalence between transfer function and state variable representations-State variable analysis of digital control system-Digital control design using state feedback.

TOTAL:45 PERIODS

OUTCOMES: Upon completion of the course, the student should be able to:

- Identify the various control system components and their representations.
- Analyze the various time domain parameters.
- Analysis the various frequency response plots and its system.
- Apply the concepts of various system stability criterions.
- Design various transfer functions of digital control system using state variable models.

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