



**VEHICLE STARTER USING ARDUINO UNO**

##### A MINOR PROJECT - II REPORT

###### ***Submitted by***

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**M.KUMARASAMY COLLEGE OF ENGINEERING, KARUR**

**BONAFIDE CERTIFICATE**

Certifiedthatthis **18ECP104L - Minor Project II**  report **“VEHICLE STATER USING ARDUINO UNO ”** is the bonafide workof “ **KARVENDAN.P (927621BEC077), KISHORE.K (927621BEC095**), **KISHORE.K (927621BEC094)** , **MOHAN KUMAR.R (927621BEC124**) who carried out the project work under my supervision in the academic year **2022-2023 - EVEN**.

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**PROJECT COORDINATOR**

**INSTITUTION VISION AND MISSION**

**Vision**

To emerge as a leader among the top institutions in the field of technical education.

**Mission**

**M1:** Produce smart technocrats with empirical knowledge who can surmount the global challenges.

**M2:** Create a diverse, fully engaged, learner -centric campus environment to provide quality education to the students.

**M3:** Maintain mutually beneficial partnerships with our alumni, industry and professional associations.

**DEPARTMENT VISION, MISSION, PEO, PO AND PSO**

**Vision**

To empower the Electronics and Communication Engineering students with emerging technologies, professionalism, innovative research and social responsibility.

**Mission**

**M1:** Attain the academic excellence through innovative teaching learning process, research areas & laboratories and Consultancy projects.

**M2:** Inculcate the students in problem solving and lifelong learning ability.

**M3:** Provide entrepreneurial skills and leadership qualities.

**M4:** Render the technical knowledge and skills of faculty members.

**Program Educational Objectives**

**PEO1:** **Core Competence:** Graduates will have a successful career in academia or industry associated with Electronics and Communication Engineering.

**PEO2:** **Professionalism:** Graduates will provide feasible solutions for the challenging problems through comprehensive research and innovation in the allied areas of Electronics and Communication Engineering.

**PEO3:** **Lifelong Learning:** Graduates will contribute to the social needs through lifelong learning, practicing professional ethics and leadership quality.

**Program Outcomes**

**PO 1: Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

**PO 2: Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

**PO 3: Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

**PO 4: Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

**PO 5: Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

**PO 6: The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

**PO 7: Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

**PO 8: Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

**PO 9: Individual and teamwork:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

**PO 10: Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

**PO 11: Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one’s own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

**PO 12: Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

**Program Specific Outcomes**

**PSO1:** Applying knowledge in various areas, like Electronics, Communications, Signal processing, VLSI, Embedded systems etc., in the design and implementation of Engineering application.

**PSO2:** Able to solve complex problems in Electronics and Communication Engineering with analytical and managerial skills either independently or in team using latest hardware and software tools to fulfil the industrial expectations.

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| --- | --- |
| **Abstract** | **Matching with POs, PSOs** |
| **Vehicle starter using Arduino UNO, Touch sensor, LCD, Motor Driver, DC Motor.** | **PO1, PO2, PO3, PO6, PO7, PO8, PO9, PSO1, PSO2** |

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**ABSTRACT**

The paper presents the “Vehicle starter using Arduino UNO”. The system mainly designed for accessing vehicle by authorized people. The presented design prevents the user’s vehicle from unauthorized access. For real time implementation of the vehicle stater system, the Arduino UNO is the heart of the system. The Capacitive touch sensor is connected to the microcontroller in which the authorized person’s fingers prints are scanned. The output module is DC motor is connected to controller with the help of the motor driver, which is enabled whenever authorized finger prints are detected. The overall system requires as power supply a power supply as +5V. By implementing our proposed model, no one can access our vehicle without our knowledge. This will lead to reduction of theft rate of vehicle and it also improve the security of our vehicle.

**Keywords:** Vehicle starter using Arduino UNO, Touch sensor, LCD, Motor Driver, DC Motor.

**TABLE OF CONTENTS**

|  |  |  |
| --- | --- | --- |
| **CHAPTER No.** | **CONTENTS** | **PAGE No.** |
|  | **Institution Vision and Mission** | iii |
|  | **Department Vision and Mission** | iii |
|  | **Department PEOs, POs and PSOs** | iv |
|  | **Abstract** | viii |
|  | **List of Figures** | x |
|  | **List of Abbreviations** | xi |
| **1** | **INTRODUCTION** | **1** |
| **2** | **LITERATURE SURVEY** | **2** |
| **3** | **EXISTING SYSTEM** | **6** |
| **4** | **PROPOSED SYSTEM** | **7** |
|  | 4.1 Block Diagram | 7 |
|  | 4.2 Power Supply | 8 |
|  | 4.3 Arduino UNO | 9 |
|  | 4.4 Capacitive Touch Sensor | 11 |
|  | 4.5 DC Motor | 13 |
| **5** | **EXPERIMENTAL PROCESS** | **14** |
| **6** | **CONCLUSION** | **17** |
|  | **REFERENCES** | **18** |
|  |  |  |

**LIST OF FIGURES**

|  |  |  |
| --- | --- | --- |
| **TABLE No.** | **TITLE** | **PAGE No.** |
| 4.1 | Block Diagram | 7 |
| 4.2 | Power Supply | 8 |
| 4.3 | Arduino UNO | 10 |
| 4.4 | Capacitive Touch sensor | 12 |
| 4.5 | DC Motor | 13 |
| 5.3 | Simulation of vehicle starter using  Arduino uno | 16 |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
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**LIST OF ABBREVIATIONS**

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| --- | --- |
| **ACRONYM** | **ABBREVIATION** |
| AC | Alternating current |
| CTS | Capacitive touch sensor |
| DC | Direct current |
| MD | Motor Driver |
| PS | Power supply |
| LCD | Liquid-crystal display |