**A COMMUNITY CONNECT PROJECT REPORT**

**OF**

**IOT BASED FALL AND DETECTION SYSTEM USING NODEMCU AND MPU6050 SENSOR**

**Submitted by**

**E.G.PRADEEP (RA2211004050026)**

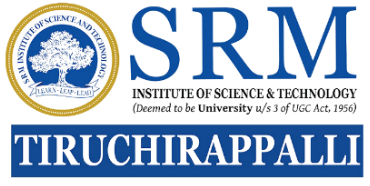
**P.SURRYA DURAI (RA2211003050094)**

**S.S.ZAMEER BASHA (RA2211003050071)**

**BACHELOR OF TECHNOLOGY**

**IN**

**ELECTRONIC AND COMMUNICATION ENGINEERING**



**SCHOOL OF ELECTRICAL AND ELECTRONICS ENGINEERING**

**FACULTY OF ENGINEERING AND TECHNOLOGY**

**SRM INSTITUTE OF SCIENCE AND TECHNOLOGY**

**TIRUCHIRAPPALLI – 621105**

**NOVEMBER 2024**



TIRUCHIRAPPALLI

**SRM INSTITUTE OF SCIENCE AND TECHNOLOGY**

**TIRUCHIRAPPALLI**

**COLLEGE OF ENGINEERING AND TECHNOLOGY**

**REGISTER NO.RA2211004050026**

**BONAFIDE CERTIFICATE**

Certified as the bonafide record of work done by E.G.PRADEEP, Register No. RA2211004050026 of5TH/3RD/(Semester/Year),B.Tech.ELECTRONICS AND COMMUNICATION ENGINEERING Programmein the project-based course **21GNP301L, Community Connect** at **SRM Institute of Science and Technology, Tiruchirappalli** during the Academic Year 2024-2025.

**Faculty In-charge Head of the Department**

Submitted for the End Semester Examination held on \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Examiner1 Examiner2**



TIRUCHIRAPPALLI

**SRM INSTITUTE OF SCIENCE AND TECHNOLOGY**

**TIRUCHIRAPPALLI**

**COLLEGE OF ENGINEERING AND TECHNOLOGY**

**REGISTER NO.RA2211003050071**

**BONAFIDE CERTIFICATE**

Certified as the bonafide record of work done by S.S.ZAMEER BASHA Register No. RA2211003050071of5TH/3RD/(Semester/Year), B.Tech.CSE Programmein the project-based course **21GNP301L, Community Connect** at **SRM Institute of Science and Technology, Tiruchirappalli** during the Academic Year 2024-2025.

**Faculty In-charge Head of the Department**

Submitted for the End Semester Examination held on \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Examiner1 Examiner2**



TIRUCHIRAPPALLI

**SRM INSTITUTE OF SCIENCE AND TECHNOLOGY**

**TIRUCHIRAPPALLI**

**COLLEGE OF ENGINEERING AND TECHNOLOGY**

**REGISTER NO.RA2211003050094**

**BONAFIDE CERTIFICATE**

Certified as the bonafide record of work done by P.SURRYA DURAI Register No. RA2211003050094 of5TH/3RD/(Semester/Year), B.Tech.CSE Programmein the project-based course **21GNP301L, Community Connect** at **SRM Institute of Science and Technology, Tiruchirappalli** during the Academic Year 2024-2025.

**Faculty In-charge Head of the Department**

Submitted for the End Semester Examination held on \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Examiner1 Examiner2**

**PROBLEM STATEMENT**

Mr.Venkateshwara babu, a 56-year-old resident of our visited NGO, is facing significant challenges due to his disability. Having lost both his legs to diabetes, Mr. Ramesh's mobility is severely compromised, making him highly susceptible to falls. Despite using a wheelchair, his risk of falling remains high, posing a serious threat to his physical safety and overall well-being. The NGO's current infrastructure lacks an effective fall detection and response system, exacerbating the issue.Falls among elderly individuals with disabilities like Mr.Venkateshwara babu are not only physically dangerous but also have profound psychological impacts. The fear of falling again creates a vicious cycle of anxiety, leading to reduced mobility and social isolation. This emotional distress further diminishes their quality of life, making it imperative to address both the physical and mental health aspects.Currently, the NGO's response to falls is reactive rather than proactive. Caregivers often discover falls only after they occur, leading to delays in medical intervention that can result in severe complications. Furthermore, the lack of tailored support for individuals with unique needs like Mr. Venkateshwara babu highlights a critical gap in our care system.To address these challenges, it is essential to develop and implement a comprehensive fall detection and prevention system. This system should include wearable technology capable of monitoring movement patterns, detecting falls, and promptly alerting caregivers. Integration with the existing care infrastructure will ensure swift medical response, reducing the risk of severe injuries. Additionally, such technology can help restore confidence and independence to residents like Mr. Venkateshwara babu, improving their psychological well-being and encouraging social interaction.