

**Project Design Phase-I**  
**PNT2022TMID29727-proposed solution**

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| Date          | 19 September 2022  |
| Team ID       | PNT2022TMID49428   |
| Project Name  | IoT Based safety gadget for child safety monitoring and notifications. |
| Maximum Marks | 2 Marks  |

**Proposed Solution Template:**

Project team shall fill the following information in proposed solution template.

| S.No. | Parameter                                | Description   |
|-------|--|---|
| 1.    | Problem Statement (Problem to be solved) | <p>Basically, children cannot complain about abusement which they face in their daily life to their parents. They can't even realize what actually happens to them at their age. It is also difficult for parents to identify their children are being abused.</p> <p>Since to prevent children before being attacked. Child goes missing in this world. To protect them in school , outside the house, when crossing road and respective environment .</p> |

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|----|-----------------------------|---|
| 2. | Idea / Solution description | <p>In this system, the collected values from every sensor like temperature sensor, pulse rate detection sensor, metal detection sensor, and the location value from GPS are used to detect the status of the child and alerts the respective guardians using GSM accordingly.</p> <p>This paper presents a system to monitor pick-up/drop-off of school children to enhance the safety of children during daily transportation from and to school. The system consists of two main units, a bus unit, and a school unit. The bus unit the system is used to detect when a child boards or leaves the bus. This information is communicated to the school unit that identifies which of the children did not board or leave the bus and issues an alert message accordingly the aim of this work is to develop a wearable device for the safety and protection of women and girls. This objective is achieved by the analysis of physiological signals in conjunction with body position. The physiological signals that are analyzed are galvanic skin resistance and body temperature. Body position is determined by acquiring raw accelerometer data from a triple axis accelerometer.</p> <p>A portable device which will have a pressure switch. As soon as an assailant is about to</p> |
|    |                             | <p>attack the person or when the person senses any insecurity from a stranger, he/she can then put pressure on the device by squeezing or compressing it. Instantly the pressure sensor senses this pressure and a conventional SMS, with the victim's location will be sent to their parents/guardian cell phone numbers stored in the device while purchasing it, followed by a call. If the call is unanswered for a prolonged time, a call will be redirected to the police and the same message will be sent. Additionally, if the person crosses some area which is usually not accessed by the person then a message with the real-time location is sent to the parent/guardian's phone via conventional SMS.</p>  |
| 3. | Novelty / Uniqueness        | <p>RFID-based System for School Children Transportation Safety Enhancement. Design and Development of an IOT based wearable device for the Safety and Security of women and girl children.</p> <p>Smart Intelligent System for Women and Child Security</p>   |

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| 4. | Social Impact / Customer Satisfaction | increased fear, guilt and self-blame. distrust of adults or difficulty forming relationships with others. disrupted attachments with those who are meant to keep them safe. mental health disorders such as anxiety, attachment, post-traumatic stress and depression disorders.                   |
| 5. | Business Model (Revenue Model)        | The model of the gadget is wearable device. Like watch , pendent and other models. That consist the GPS to track the location of the person . If it is business model we first consider about cost and the gadget is not harmful to health. Because the device was used by the person in 24 hours. |
| 6. | Scalability of the Solution           | The scalability we can use the gadget in 24 hours. That sense and sends the information to the parents and guardians to the right ways. To ensure that it works in the day full. This is the scalability of the gadget   |