# Autonomous Baby Care System

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Baby nets are important for protecting babies from mosquitoes and insects, and give a good sleeping experience. Baby cradles, which are currently available in the market do not give any extra level protection to babies. Existing systems do not have the interaction with mothers as they cannot be with their babies all the time. Therefore, in order to ensure a baby's safety in all aspects, the main objective of this study is to produce an Autonomous Baby Care System to provide an extra level of protection to babies with alert message system. In some cases, if a mother is not in the close proximity to her baby and the baby is awakened from sleep and crying, the situation can be identified using sound sensors and then the system will sing a lullaby and swing the baby cradle to make the baby sleep. And also if the baby has urinated, it can be identified using humidity sensor and alert the mother with a buzzer sound along with the LCD display message to change the diapers. In addition, the system will continuously monitor the weather around the baby and according to the temperature, it will control the fan speed. Arduino is the main control unit of this system. Arduino gets the input signals from the sensors attached to the baby net, process it, and gives output signals to take necessary actions, such as controlling the fan, playing a lullaby, and swinging the cradle. Also it will send the status to mother's receiver panel. The system successfully identifies the input signals from Sound sensor, Temperature sensor and Humidity sensor and results desired actions from 94% of the outputs. As a future improvement and for commercial use, Artificial Intelligent (Al) techniques can be used to improve the accuracy of the output of the sensors.

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