SafeSeat

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Since 1998, on average, every ten days a child dies from hyperthermia after parents leave them behind in a car. The goal of this project is to create an infant car carrier that alerts both the caretakers and emergency responders in the event an infant is left unattended in a hot vehicle. The project is built around a Raspberry Pi 3 with an Adafruit® FONA 808 shield for GPS, cellphone call, and SMS alert notification. Hardware functionality is controlled using the Python programming language. The system constantly monitors for weight in the carseat and the open/closed state of its safety buckle. If a child is secured in the seat and the temperature rises in excess of 8°C or surpasses a heat threshold of 37.8°C (100°F), SafeSeat lowers the car's windows and sounds an audible alarm to draw public attention to the vehicle. SafeSeat captures the vehicle's GPS coordinates, and an SMS text notification with map location is sent to the child's caretakers. A 911 call using text-to-speech alerts the operator of the emergency and provides GPS location coordinates. The system runs free of error and met the goals set in the design criteria.

Awards Won:

International Council on Systems Engineering - INCOSE: Certificate of Honorable Mention