# Cost Effective Device for Preventing Hot Car Deaths

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According to the Department of Meteorology and Climate Study at San Jose State University, seventy-four heat stroke deaths among children in the United States in the last two years were caused by exposure to a hot vehicle. The risk associated with leaving your child in a hot car is deadly, but according to U.S. National Highway Traffic Safety Administration (NHTSA), devices that can accurately predict the presence of a child are not currently in the market. The purpose of this project is to create a cost effective device that can prevent hot car exposure and adhere to all market demands. The device must alert adults of a child in the back seat when leaving the vehicle. To fulfill this task, the device must meet the demands of parents and NHTSA, so the product must be designed with the following characteristics: cost effectiveness, portability, consistency with child orientation, electronic interference shield, and accidental disarming safeguard. The device was tested on the basis of range and auditory data, and proved to work efficiently with the tested levels of weights and from a circular device range of 45 feet. The cost of creating such a device was determined to be around $6.00 (based on AdaFruit products at mass production rates). The size of the components used in this device are very small allowing the device to become portable, and a polyurethane casing enclosing the device would prevent short-circuits and stray charges in any situation. The device adheres to all demands of the market and the NHTSA.

**Awards Won:**