TED UNIVERSITY

CMPE 491 / SENG 491 Senior Project

General AI Safety Systems Project Proposal

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Project Name	General AI Safety Systems
Project's URL	https://general-ai-safety-systems.onrender.com

Project Idea Description

This program aims to greatly improve children's safety and security during school transportation by combining modern image processing and artificial intelligence technology. The technology incorporates important features like real-time face recognition to confirm each child's attendance on the bus, ensuring that no one is left behind or picked up by mistake. Seatbelt monitoring technology is used to ensure that youngsters remain correctly fastened during the ride, lowering the risk of harm during accidents or unexpected stops. Furthermore, in-vehicle behavior analysis employs AI to detect any aberrant or unsafe behavior, allowing for real-time intervention if necessary. The system is intended to handle possible safety problems before they escalate, resulting in a greater degree of security throughout the transit process. Furthermore, parents and school officials receive regular reports on the children's whereabouts, trip progress, and any issues, providing peace of mind and increasing transparency.

Aside from solving urgent safety concerns, this initiative addresses various bigger issues related to school mobility. One crucial issue it addresses is the safety of each child within the car, dramatically lowering the likelihood of accidents, illegal exits, and risky conduct. The technology employs artificial intelligence to automate the monitoring of seatbelt usage and behavior, reducing the likelihood of human mistake. The effort also features dynamic route optimization, which uses real-time traffic, weather, and environmental data to make the travel as efficient as possible. Optimizing travel routes saves time, increases energy efficiency, and decreases delays. Furthermore, improved communication among parents, drivers, and school administration ensures that any delays, crises, or changes in transportation are reported quickly, resulting in a safer, more dependable, and transparent transportation experience for all stakeholders. The initiative's goal with these steps is to build a comprehensive solution that assures children's safe and efficient transportation while also providing families and schools with peace of mind.