

Thermal imaging to reduce pedestrian fatalities: a case study of night AEB

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ABSTRACT

Road fatalities that represent 1.35 million deaths each year is the 8th cause of decrease in the world, 23% of them are pedestrians. In US or Europe, accidents happen for 75% of the time in poor weather and lighting conditions. Safe vehicles and active safety is a promising way to reduce it with features like Active Emergency Braking. Currently, it relies mainly on RGB camera and radar that suffer of limitation on challenging situations that represents the majority of accident situations. Thermal imaging is a complementary technology to RGB to extend AEB use cases. This talk will explore thermal imaging physics and optic considerations for AEB use-cases. Dynamics simulation model made by Lynred coupled with Johnson criteria will provide range and performance estimation. The conclusion will explore different configuration to improve system performance.