

Outline

- Abstract
- Graphical abstract
- Keywords
- 1. Introduction
- 2. Literature review
- 3. Proposed model
- 4. Discussion
- 5. Conclusion
- Declaration of Competing Interest
- References

Figures (11)



Recommended articles

No articles found.

Citing articles (0)

Smart traffic monitoring system using Unmanned Aerial Vehicles (UAVs)

Navid Ali Khan ^a, N.Z. Jhanjhi ^{a, *}, Sarfraz Nawaz Brohi ^a, Raja Sher Afgun Usmani ^a, Anand Nayyar ^b

[Show more](#)

<https://doi.org/10.1016/j.comcom.2020.04.049>

[Get rights and content](#)

Abstract

Road traffic accidents are one of the leading causes of deaths and injuries in the world resulting in the not only loss of precious human lives but also affect the economic resources. According to the World Health Organization (WHO), over 1.35 million people are killed, and over 50 million are injured due to road accidents throughout the world. Unfortunately, as compared to other developing countries with the same ratio of vehicle possession, in Saudi Arabia, the fatalities and injuries are much higher. Every year around 7000–9000 people die, and over 39000 serious injuries occur in road accidents. There is at least one accident happens every minute in Saudi Arabia. To decrease the road traffic accidents, fatalities, and injuries caused by them, the Saudi Ministry of Interior came up with new rules, regulations, and hefty fines. Also, they introduced a new traffic system called the SAHER system. Still, due to the static nature and other limitations of the system, the drivers found loopholes and ways to deceive the system to avoid the fines and not being caught by the system. The most common violation includes excess speed, abrupt deceleration, and distracted driving. In this paper, we propose a smart traffic surveillance system based on Unmanned Aerial Vehicle (UAV) using 5G technology. This traffic monitoring system covers the existing limitations of the SAHER system deployed in KSA. By overcoming the existing limitations and loopholes of the SAHER system, it is observed that the number of accidents and fatalities can be decreased. The projected results show that those violations when to overcome, the number of accidents per year falls to 299,317 leading to 4,868 deaths and 33,199 injuries for 1st year, and in the next five years the number of deaths and will be decreased to 3,745 and injuries to 16,600 based on the current data available. We aim the system will further reduce the number of accidents and fatalities and injuries caused by it.

Feedback