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Enhancing Autonomous Vehicle Safety Through Collaborative Robotic Features

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Abstract

Nowadays, the automotive industry stands at the forefront of transformative change. This paper focuses on augmenting modern automobiles with collaborative robotic features, specifically emphasizing robot-robot collaboration through a multi-robot system. The proposed approach envisions vehicles communicating crucial information to nearby counterparts, fostering a collective response to potential threats and hazards on the road. The proposed prototype comprises a master-slave configuration involving two cars, where the master car transmits vital information to the slave car, guiding its actions based on real-time environmental data. This communication empowers the master car to proactively alert the slave car to obstacles and propose optimal solutions while both vehicles are in motion. The primary objective is to successfully develop a prototype that enables vehicles to share information, facilitating adaptive navigation and obstacle avoidance. Aligned with Vehicle-to-everything (V2X) technology, this research uses Vehicle-to-Vehicle (V2V) communication as a practical implementation of intervehicular collaboration. The anticipated outcome is a tangible contribution to the advancement of autonomous vehicle safety by harnessing real-time communication for dynamic hazard mitigation. This research contributes to the ongoing evolution of autonomous vehicles, enhancing their safety and responsiveness in complex driving scenarios. © 2024 IEEE.

References (9)

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- ☐ 1 Sankar, K.R., Malathi, K.
Vehicle to vehicle communication for collision awareness

(2016) *International Journal of Pharmacy and Technology*, 8 (4), pp. 21361-21369. Cited 2 times.
<http://www.ijptonline.com/wp-content/uploads/2017/01/21361-21369.pdf>

- ☐ 2 Attarbashi, Z.S., Thamodharan, T.A.-L., Abuzaraida, M.A., Iftikhar, S., Alansari, N.A., Basri, A.B.B., Handayani, D.O.D.
Using IoT-Based Mobile Application to Build Smart Parking System

(2023) *2023 IEEE 9th International Conference on Computing, Engineering and Design, ICCED 2023*. Cited 3 times.
<http://ieeexplore.ieee.org/xpl/mostRecentIssue.jsp?punumber=10424960>
ISBN: 979-835037012-6
doi: 10.1109/ICCED60214.2023.10425326

[View at Publisher](#)

- ☐ 3 Alkandari, A., Abuzaraida, M.A., Alfoudery, A.
Light Mobile Application for Roads Accident Report

(2021) *International Journal of Mechanical Engineering*, 6 (3), pp. 198-206. Cited 2 times.
<https://kalaharijournals.com/ijme.php>

- ☐ 4 Ali, Z., Lagen, S., Giupponi, L., Rouil, R.
3GPP NR V2X Mode 2: Overview, Models and System-Level Evaluation

(2021) *IEEE Access*, 9, art. no. 9461188, pp. 89554-89579. Cited 128 times.
<http://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=6287639>
doi: 10.1109/ACCESS.2021.3090855

[View at Publisher](#)

- ☐ 5 Chowdhury, K.R.
(2022) *Bluetooth Controlled Arduino Based Autonomous Car Final Report*
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