Review of: "Design and analysis of hand-break release system with the help of accelerator of automobile vehicle"

Nikhil Marriwala[1]

1 Kurukshetra University

Potential competing interests: No potential competing interests to declare.

1. The description lacks details on the control logic that governs the interaction between the accelerator and the handbrake release system. A clear diagram or flowchart illustrating the system operation under different driving conditions (e.g., starting, stopping, parking) would enhance understanding.
2. While the manuscript includes a discussion on the development and CAD modeling of the prototype, it lacks comprehensive testing data. The authors should present empirical results demonstrating the system's performance under various real-world conditions, such as on different slopes or during emergency braking scenarios.
3. How does this system comply with existing safety norms?
4. What certifications or approvals would be necessary for commercial deployment?
5. The manuscript mentions other automated handbrake systems in the literature review but does not provide a comparative analysis. Including a comparison of the proposed system with existing technologies in terms of cost, complexity, ease of installation, and reliability would add value.
6. The authors should also discuss the potential advantages of their system over others, such as reduced weight, lower power consumption, or better integration with existing vehicle systems.
7. A flowchart outlining the system’s operational sequence when the accelerator is pressed or released would provide a clearer understanding of the control mechanism.
8. Conduct real-world tests to evaluate the system's performance under different conditions, including varying vehicle weights, road inclines, and weather conditions. Collect data on the reliability, response time, and durability of the system.
9. Perform stress testing to determine the maximum load the system can handle without failure.
10. Conduct a cost-benefit analysis comparing the proposed system with traditional handbrake systems and other automated solutions.
11. Perform a comparative study with other automatic handbrake systems in terms of operational efficiency, reliability, and user experience.