

5-6 SUCH VEHICLES TO HIT MARKET BY 2025-28

AI to power safety features in M&M's sports utility vehicles

SWARAJ BAGGONKAR
Mumbai, November 20

ARTIFICIAL INTELLIGENCE (AI) WILL aid sports utility vehicle (SUV) specialist Mahindra & Mahindra (M&M) in powering vehicle safety features like collision avoidance systems, lane assist and a host of other creature comforts in the range of electric vehicles that will debut in the next few years.

For instance, one of the primary causes of vehicular collisions worldwide is faulty lane changing decisions. Drivers sometimes avoid giving signals during such maneuvers, often leading to accidents.

An AI-assisted system will avoid such events by using on-board sensors to detect and warn motorists about approaching cars in adjacent lanes.

Automatic braking or emergency braking, adaptive cruise control is and auto park assist are other applications that will have AI being used.

Speaking exclusively to *FE*, R Velusamy, president, automotive technology and product development, M&M said, "AI can be for product development processes, be it aerodynamic optimization, weight optimization and crash simulations to choose the best combinations". The company is working on 5-6 born electric SUVs which will be launched between 2025-28. These vehicles will

LEAVING LESS TO CHANCE

■ AI would power electric vehicle safety features like collision avoidance systems, lane assist and a host of other creature comforts

■ For instance, an AI-assisted system would use on-board sensors to detect and warn motorists about approaching cars in adjacent lanes

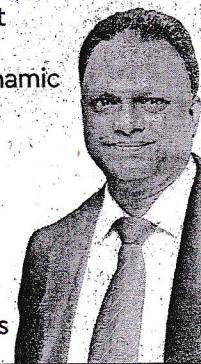


M&M also plans to use AI in the process of vehicle manufacturing

■ AI will also be used to aid automatic braking or emergency braking, adaptive cruise control & auto park assist

R VELUSAMY,
President, automotive technology
and product development, M&M

AI can be for product development processes, be it aerodynamic optimization, weight optimization and crash simulations to choose the best combinations



become the benchmark for the brand in areas such as technology and vehicle design. Velusamy, said that advanced safety-driven vehicle features, that go beyond just the age-old passive safety mechanisms like airbags and seat belts, will largely rely on AI-fed by algorithms.

He said that AI can help achieve the optimum design of a given vehicle from the point of view of aerodynamics, reduce wind resistance caused at higher speeds but at the same time be vital in the event of an accident by providing maximum safety to the vehicle's occupants.

"You can use AI over cloud, guide it into the vehicle's computers

where you can have an algorithm and help making decisions that have to be made on the spot; for example, ADAS (advanced driver assistance systems), autonomous driving, corrected cause and customer alerts," Velusamy added.

But besides product features, the area where AI will be best put to use is the process of vehicle manufacturing.

The time and cost consumed during the process of vehicle manufacturing can be brought down significantly while improving the overall quality level.

"Suppose you have 400 aerodynamic simulations using computers. The algorithm will bring it

down to 250 and stick to it. So, the end result is that the number of run hours in the computer are reduced dramatically," Velusamy added.

M&M is not the only company to embrace AI.

The adoption of AI into the manufacturing activity at Apollo Tyres, India's second largest tyre maker by tonnage, has allowed it boost efficiency, quality and improve output at its plants with no additional cost.

Delhi-based Apollo claims to have achieved more than 8% in efficiency using AI. This upgrade has allowed its management to be optimistic of sustaining improvement in margins in its guidance.