

Career in Automotive Design and Job Opportunities



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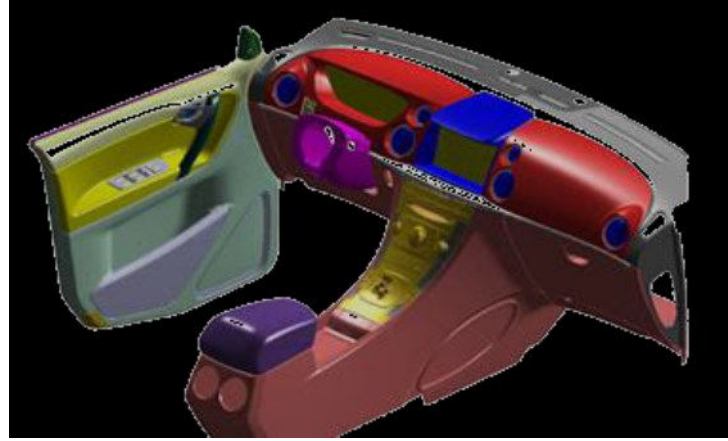
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The Automotive Industry is in the midst of a technological revolution characterised by the convergence of new digital technologies with the traditional car manufacturers. With the advancement in research and development of electric and driverless technology, auto industry is on the verge of complete revolutionary design of the vehicle. In today's world, people are more focused on stylish, aggressive and luxurious vehicles than the traditional vehicles. This is adding more challenges to auto industry to design & develop unique styled interior & exterior parts that would be more appealing, comfortable, user friendly and attract customers within shorter period of time.



As we all know, electric vehicles are the new normal in today's world. The benefits of using electric vehicles are very well known to everyone. When we see it from mechanical engineering point of view, this means - Vehicle has to be light weight to improve performance/mileage. The body shapes have to be lower, wider and longer to improve aerodynamics and body space saving with double doors technology. Companies are spending lot of money in R&D and innovation work on Exterior and BIW of the vehicle, thus opening doors for young, talented and creative engineers to showcase their skills and be part of automotive revolution.

Similarly, Interior of the vehicle is also going through a huge transformation and I bet, you have already started noticing it in the new vehicles. Let me talk about few top technologies, which companies are focusing and working on implementation.



First, Driverless Automation Technology- With increasing driving assistance, Predictive ride technology and safety features like adaptive cruise control and lane departure warning are becoming commonplace. Second, Connected Vehicle Technology for connected wireless networks within vehicle and vehicle to vehicle for bi-directional communication, route planning based on traffic conditions, finding parking in real time. Third, Heads Up Display (HUD) is a transparent display that presents data like speed, fuel level, time etc. in the automobile without requiring drivers to look away from roads.

To fully implement these Automation, Connected Vehicle & HUD technologies, interior of the vehicle needs huge transformation to incorporate these changes, **which in turn is creating large scale job opportunities in design and development of the Instrument Panel, Door Trims, Consoles, Seating System and other interior parts of the vehicle.**

In addition to this, alternate materials like Carbon fiber composites are promising as the next big frontier in automotive market. The biggest advantage is a high strength to weight ratio, while also demonstrating stiffness and ability to be worked into complex shapes. New material will bring new challenges, requirements, and design and development activities to validate in all aspects.

With the modern manufacturing environment & increased global competition, Industries cannot survive unless they introduce new products/features with better quality, lower costs and with shorter lead time.

In addition to this, dramatic changes in computing power & wide availability of software tools for design & production, companies are now widely using CAD, CAM & CAE systems to automate their design & production process to save time, money and launch new vehicles in shorter span.

These advancements have not only reduced Product Development timing (i.e. Concept to Launch) from 5 years to 2-3 years, it also opened job opportunities for skilled design engineers to meet customer's ever changing requirements with best quality and stringent program timing.