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Technologies Used to Reduce Human Intervention Processes

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Description

Suppose you're on the way to some trip and travelling by road. With an outsized number of toll collection booths and endless multiple queues ahead of you, you most likely ask your friend "Hey which lane can we line up" and judgmentally a devotee suggests one among them. (But possibly other queue would have made your car pass by faster. Is it not dependent on the people working at the booths? Imagine you undergo the booth and therefore the toll is auto deducted by means of in-vehicle unit specially designed for your car. Sensors capture the vehicle number and deduct the pre-deposited amount from the in-built chip. Such electronic toll collection system is found at Ahmedabad-Mumbai highway and a few of other places in India. This system must be made more intelligent to make it work in Indian context across the varied roads and highways in India. Certain changes can make it highly effective in terms of your time and manpower utilisation in Indian context. The improved system can help the govt by means of study of the records of the quantity collection on week days and other statistics. At present, there are semi-automatic toll collection systems at Bangkok. Just imagine a toll system that's intelligent and vehicle based. Such a system can direct the vehicle to proper lane and can be able to keep a track record of regularity of payments. In case, some very regular payee misses, the detection on one among the occasion is often possible. This can be possible with a prepaid card-based toll collection, where a prepaid card is used or even there are often a vehicle number based toll collection, where it's connected to the bank account of vehicle owner. It is often different for interior roads and expressways. Hence intelligent system can revolutionize the simple application of toll collection and different intelligent system applications right from planning to decision-making, and thus, can help in building a better system.

A simple sub-application is discussed here. At present, it is possible to suggest you to line up at a particular lane. The moment you approach a toll booth, the AI system would analyse the vehicles at the different lanes (including analysis of density and the size or even detection of some failure at one among the lane then on) and intimate you about the lane number you ought to enter and therefore the time that you simply would take. Let us take one more example. It is often seen that the loading of fabric in trucks for transport is completed manually. What would happen when a robot is employed?A simple robot can assist in saving the labour cost and help in improving the efficiency of the work. Such a robot is tuned to lift an object and place it within the truck. But is there any intelligence involved in it? Does this robot consider space requirements? No, but an intelligent one will definitely do it. An intelligent robot would take up the thing and place it efficiently such the space of the truck is utilised to the fullest. Thus, an intelligent robot would overcome space and time complexities. To add further, a robot without intelligence would fail to work if the road/path is filled with obstacles, but an intelligent one would perceive this and take a different route and carry out the task. Moreover, such an intelligent system can consider weight, size, material of which the articles in the box are composed (whether articles in box are brittle and to be kept in a particular way). Also it can scan size of box determine other properties of the box and load different boxes optimally.

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