

Voice Control Car Using Machine Learning

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ABSTRACT

The aim of our project is to make a voice Control car. The working based on Arduino micro-controller, motor drivers, a Bluetooth module. Arduino is an open-source hardware (single-board micro-controller and kits) used for building digital devices. The idea is to first design the hardware of the car and then code the entire working using our previous knowledge of programming. The code will then be simulated on software (IDE) and later be interfaced with the hardware. The co-ordination of the control unit with the Bluetooth gadget is accomplished utilizing a Bluetooth module to catch and read the voice orders. The controlling remote is smart Android device with Bluetooth application . We picked this our project as a become major part of our everyday lifestyle and also have a wide scope in the engineering field. It plays a vital role in the development of new technology

Introduction

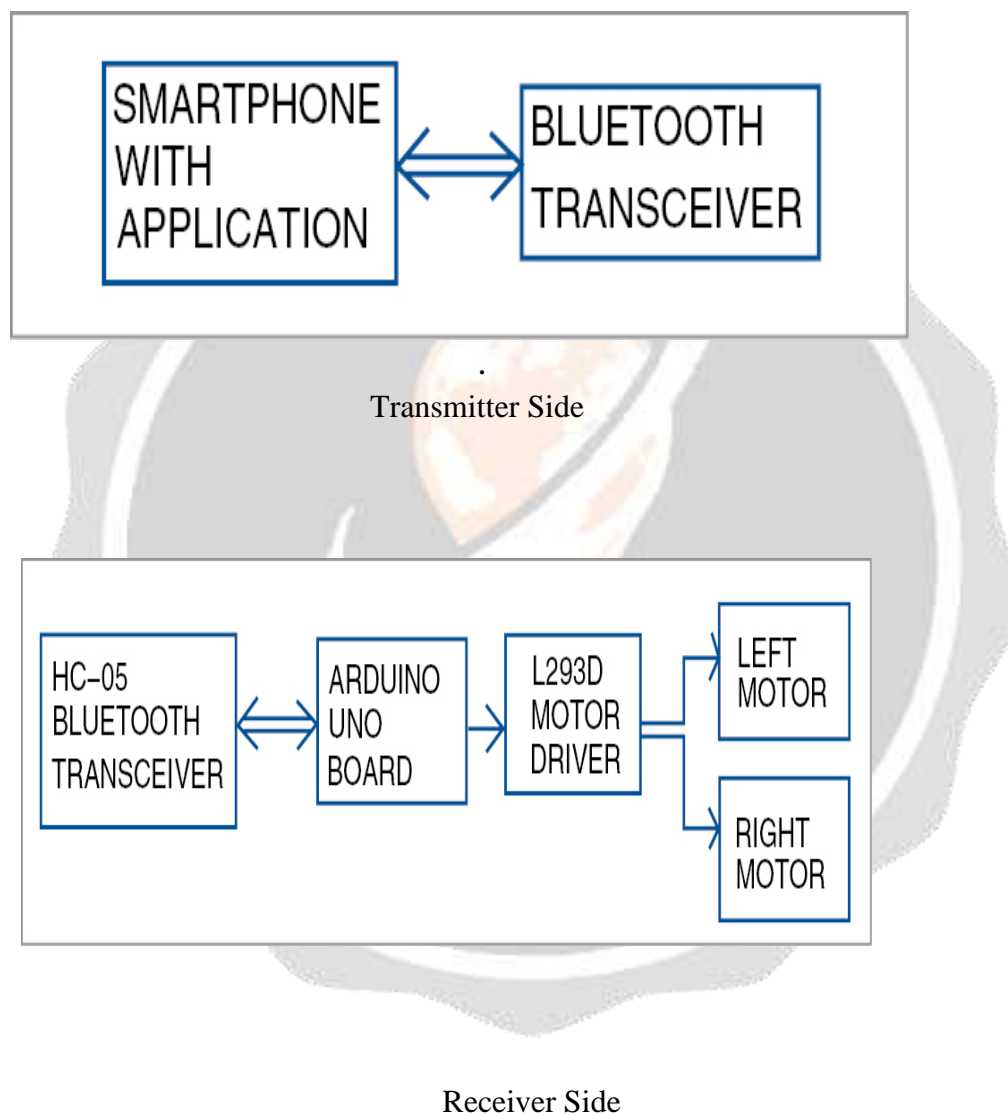
Nowadays smart things are very useful for communication. This project describes the implementation of voice controlled using Arduino. In this project, the user gives a specific voice commands to the car through an Android app installed on the smart phone. At the receiving side, a Bluetooth transceiver module receives the command and forwards to the Arduino on the car. Arduino controls the movements of the car according to the received commands. The car moves forwards, backwards, left and right, and stops according to voice commands respectively. Technical Work

Digital voice-activated assistants have indeed made quite a sensation, making their impact on our cell phones, laptops, smartwatches, vehicles and even our household. In voice controlled car systems in many

new vehicles have become almost basic feature today. While driving, this seeks to eliminate the boredom of looking at your mobile

phone. A heads-up showcase, instead, enables drivers their attention on the road

and to keep their safe. Corporation such as Google, Tesla are reshaping the voice activation in cars. It depends on the car you are driving to do precisely what you can do with in car voice control

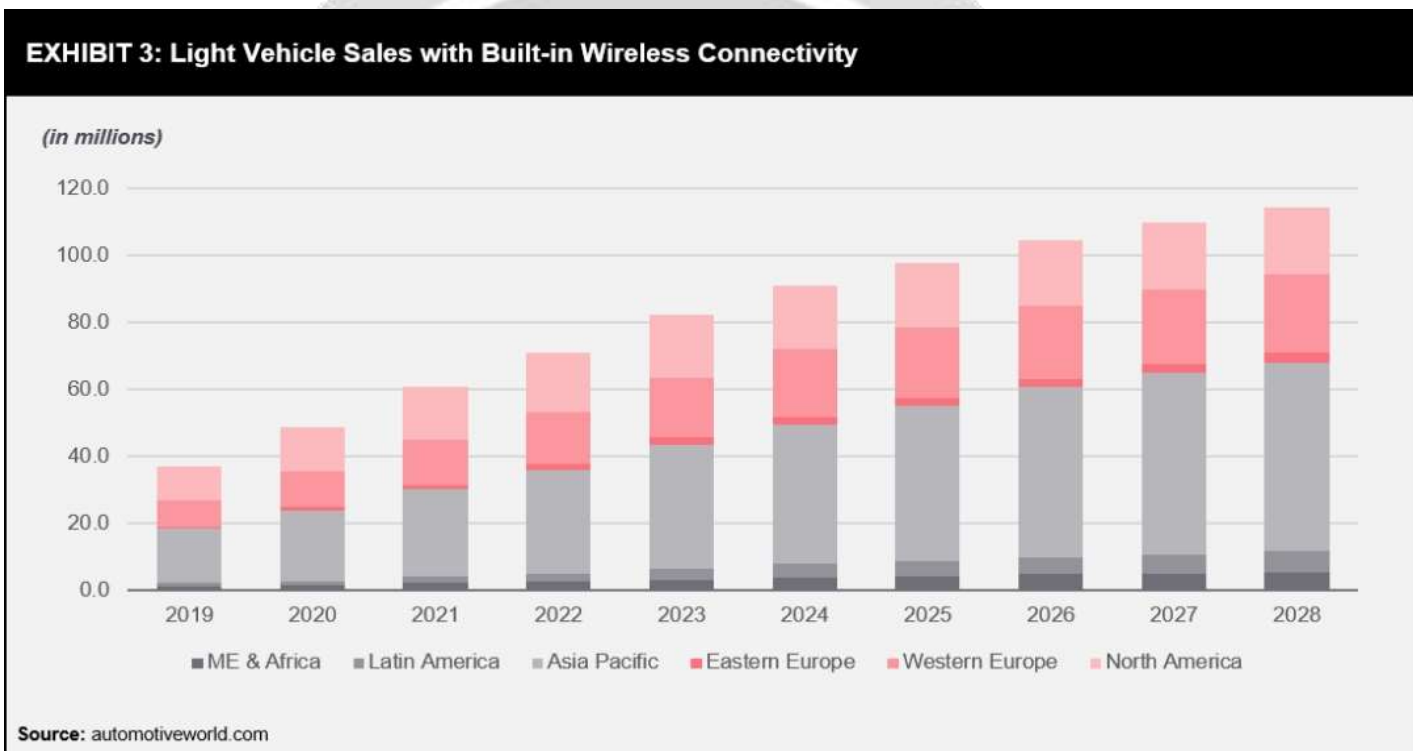


When the app running on users smart phone it's voice commands are detected by the microphone present in the phone. Commands received via Bluetooth is forwarded to Arduino uno board using UART communication protocol.

Where is the market?

Growth in wireless connectivity in vehicles Automakers, mobile operators and networking equipment manufacturers are collaborating to develop to connected car solutions. Last year KIA Motors and HYUNDAI Motors announced their plans to launch their own connected vehicle services with UK based mobile operator Vodafone. This is just one example, according to one of the global research organizations, the overall market connected to the car market is expected to over the \$155 billion

by 2022. Annual sales of light vehicles with in-built is wireless connectivity is expected to reach approximately \$177 billions by 2028.



Results

Driver distraction is one of the biggest causes of deaths and injuries on our roads. As a result, car manufacturers have invested billions into driver aids designed to help reduce distraction. One of the most powerful is adding voice control to cars. This allows the driver to interact with the infotainment system in a totally hands-free manner.

Conclusion

The “ Voice Controlled Car “ project has many applications and in present and future. The project can be made more effective by adding features to it in the future. In wide variety of areas such as military, home security, rescue mission, industry and medical assistance etc. We were successful in implementing a simple model of voice controlled car using the available resources.

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