

Deep learning based Blockchain solution for preserving privacy in future vehicles

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Abstract: The Internet of Things (smart things) is used in many sectors and applications due to recent technological advances. One of such application is in the transportation system, which is of primary use for the users to move from one place to another place. The smart devices which were embedded in vehicles are useful for the passengers to solve his/her query, wherein future vehicles will be fully automated to the advanced stage, i.e. future cars with driverless feature. These autonomous cars will help people a lot to reduce their time and increases their productivity in their respective (associated) business. In today's generation and in the near future, privacy preserving and trust will be a major concern among users and autonomous vehicles and hence, this paper will be able to provide clarity for the same. Many attempts in previous decade have provided many efficient mechanisms, but they all work only with vehicles along with a driver. However, these mechanisms are not valid and useful for future vehicles. In this paper, we will use deep learning techniques for building trust using recommender systems and Blockchain technology for privacy preserving. We also maintain a certain level of trust via maintaining the highest level of privacy among users living in a particular environment. In this research, we developed a framework that could offer maximum trust or reliable communication to users over the road network. With this, we also preserve privacy of users during traveling, i.e., without revealing identity of respective users from Trusted Third Parties or even Location Based Service in reaching a destination. Thus, Deep Learning based Blockchain Solution (DLBS) is illustrated for providing an efficient recommendation system.

Keywords: Trust in future vehicles, privacy preserving techniques, Blockchain technology, recommender systems, authentication

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