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Toward blockchain adoption for the automotive industry

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Abstract

Blockchain proves to be a powerful technology that can drive forward the automotive industry. This paper describes how blockchain has been applied, which automotive areas are most interested in the technology, as well as the benefits and challenges of blockchain for the automotive industry by a systematic literature review. Blockchain offers many advantages, such as: transparency, security, high speed of operations. There are numerous areas where this technology could be applied in the automotive domain: better protection against counterfeit spare parts and materials, effective preventive maintenance, by informing the services based on the data received from the car sensors, monitoring of the cars by the rental companies, the safe storage of the data used by intelligent navigation systems, in order not to affect the safety of the passengers, autonomous transactions, triggered by the vehicle for making payments in charging stations, all with the purpose of facilitating a good and safer medium for drivers. The future vehicle will be connected both with other vehicles, but also with the existing infrastructure, so a database containing cryptographically secure information is needed, and blockchain is such a solution that can be applied in the dynamic nature of traffic.

Keywords: blockchain, automotive industry

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