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## A Novel and Failsafe Blockchain Framework for Secure OTA Updates in Connected Autonomous Vehicles

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Connected Autonomous Vehicles (CAVs) are becoming data centers on wheels, amassing petabytes of data, as they require a combination of software and hardware systems and sub-systems in order to operate reliably and simply in real-time. This project proposes a secure and scalable software updates framework in a distributed manner for the CAVs, leveraging Blockchain (BC) with smart contract technology. The framework is able to overcome slow processing speed which is one of the major limitations of BC with a high level of security against possible cyber-attacks. We use a salting-based hashing scheme over the traditional Elliptic Curve Cryptography (ECC) Key to ensure multi-factor authenticated protection from any malicious transaction while downloading and installing any new feature update in CAVs. Moreover, by using Hyperledger BC, our framework ensures immutability, load-management capability and cost-free transactions while successfully upgrading and deploying Over-The-Air (OTA) software patches in any system of CAVs.