
A New Machine Learning Based Privacy Preserving and Data Federation Blockchain Platform

(U.S. provisional patent number 63,063,434, Aug. 10, 2020.)

ABSTRACT

The disclosure relates generally to a new blockchain platform for data federation and privacy preservation by using machine learning. This blockchain platform uses differential privacy to add noise into the raw data to protect the user privacy, and use multi-party computation to achieve the data federation from different parties without leaking the confidential information of each other. The platform use one core network, four smart contract modules, namely, Query Smart Contract (QSC), Data Smart Contract (DSC), Controller Smart Contract (CSC), and MPC Smart Contract (MSC), to interact with query customers, data owner, MPC controller, and MPC nodes respectively, and one SDK to facilitate the workflow from the data query customer to data owner, and to the controller and multi-party computation nodes.