A Blockchain-based Decentralized Federated Learning Framework with Committee Consensus:

Federated Learning (FL) is a proposal to allow user data to be used in machine learning without storing the data on a central server. The problem with storing this data on a central server is that It can violate the privacy of the users, and with the introduction of GDPR this is more important for companies than before. The paper proposes using blockchains for storage of user data as it is decentralised. The proposed framework is called BFLC which will define training, model storage patterns and a novel committee consensus. The paper proposes 3 challenged that need to be addressed: Consensus efficiency: A broadcasting consensus can be time consuming, this need to be made more efficient. Model security: Security need to prevent unauthorized devices to access the network. Framework scalability: With the amount of nodes that are included in training scalability decides what real word applications that the framework can work with.

A Blockchain-Based Framework for Supply Chain Provenance

Due to globalization, handling the integrity and security of the electronic supply chain is growing to be challenging. Rise of counterfeit circuits are a rising problem. These The paper proposes a blockchain than can provide traceability through a unique device id using a one time programmable memory. In order to prevent problem with single transaction blockchains with problems like receivers cancelling an order after the transaction is marked as complete or parts being stolen during transportation, a two-transaction based solution is proposed. This will require a receiver to send a confirmation transaction once he has received a part in order for ownership of this part to be transferred.