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Title: First Abstract for LSAMP Summer Research

The overall idea of the project is to have a better understanding of block chain and implementations. The big obvious ones are in digital currencies, like bitcoin, or e-commerce but it is not necessarily limited to those areas. My role in the project would be to construct a general analysis of block chains functionalities, as well as testing out code on how block chain is used in a P2P network. I’ll be doing this by using hyperledger fabric, a starting array of tools that help me construct my own blockchain network to see what the general specs of a network would come about. The outcome should clearly illustrate all the benefits and setbacks to the block chain and different ways it could be implemented into various industries. This is where a general blockchain network could be specialized to concentrate on one thing. The goal is to try to make a versatile program that can build on the overall pros of block chain and be implemented into an AI. The integration of Blockchain provides AI with traceability, proof of authenticity and easily accessible records. This speeds up an AI network and makes its more reliable and allows transactions in the AI network to be traced. Blockchain so far has been mainly used in a decentralized environment but a private and central system allows AI to function more efficiently. The project consists of the preface stage where the general block chain structure is completed using hyperledger fabric. Once the block chain network is finished I’ll test the integration of an AI model. I’ll be using TensorFlow Lite’s machine learning models which includes, image classification, object detection, pose estimation, style transfer, segmentation, smart reply, text classification and question and answer, to see how different models respond to a Blockchain private network structure. The analytical data will be managed and analyzed with Thingspeak ,an IoT analytics platform, to provide results of the added distributed ledger. The use of two Coral USB Accelerators will be used in conjunction with two Raspberry Pi 4s to simulate multiple IoT devices that the machine learning models uses as well as add computational power that the machine learning models needs.