Ping An Technology's Federated Learning Technology Team is exploring ways of aggregating more-dimensional and higher-quality data from more sources using the federated learning approach in order to improve Artificial Intelligence (AI) model training. As a key element in the implementation of this solution, Intel® Software Guard Extensions (Intel® SGX) enables creation of a trusted "enclave" in specific hardware (such as memory), with security boundaries of data and applications limited to the "enclave" itself and the processor. Based on the features of Intel SGX, the Federated Learning Team worked with Intel to design a 1+N multi-source data AI model training approach in its federated learning solution, resolving data security and training effect assessment issues better.

"Intel® Software Guard Extensions is ideal for building hardware trusted execution environments in federated learning solutions. Through processor instructions, it creates trusted zones in different data sources for data access. This helps us enhance the training effect of AI models with multi-source data through further improving data security."

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