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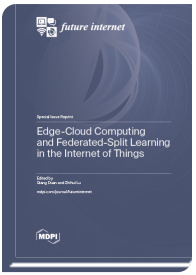
Special Issue Reprint

Edge-Cloud Computing and Federated-Split Learning in the Internet of Things



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Federated Learning (FL) is a new collaborative learning method that allows multiple data owners to cooperate in ML model training without exposing private data. Split Learning (SL) is an emerging collaborative learning method that splits an ML model into multiple portions that are trained collaboratively by different entities. FL and SL, each have unique advantages and respective limitations, may complement each other to facilitate effective collaborative learning in the Internet of Things (IoT). The rapid development of edge-cloud computing technologies enables a distributed platform upon which the FL and SL frameworks can be deployed. Therefore, FL and SL deployed upon an edge-cloud platform in an IoT environment have formed an active research area that attracts interest from both academia and industry. This reprint of the special issue "Edge-Cloud Computing and Federated-Split Learning in the Internet of Things" aims to present the latest research advances in this interdisciplinary field of edge-cloud computing and federated-split learning. This special issue includes twelve research articles that address various aspects of edge-cloud computing and federated-split learning, including technologies for improving the performance and efficiency of FL and SL in edge-cloud computing environments, mechanisms for protecting the data privacy and system security in FL and SL frameworks, and exploitation of FL/SL-based ML methods together with edge/cloud computing technologies for supporting various IoT applications.

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