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26th International Conference on Computer and Information Technology : Submission (328) has been edited.

Microsoft CMT <email@msr-cmt.org>

Wed, Sep 6, 2023 at 9:53 PM

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Hello,

The following submission has been edited.

Track Name: ICCITconf2023

Paper ID: 328

Paper Title: Decentralized Federated Learning for Real-Time Traffic Prediction in Smart Cities

Abstract:

Decentralized Federated Learning (DFL) is similar to a Machine Learning (ML) approach, which works in a distributed manner. This approach enables collaborative learning prediction without the need to share any raw data among different entities. Existing traffic prediction approaches by ML or Deep Learning have an excellent success rate. However, this raises a privacy concern as the data sets contain a large amount of user personal data. That's why the DFL approach is ideal for such predictions, as it offers an efficient solution by utilizing the capabilities of multiple learning agents while solving the concern by preserving data privacy. By applying Recurrent Neural Network (RNN) and Long Short Term Memory (LSTM) in a federated learning framework, the algorithm can learn from the vast amounts of data that are gathered from numerous sources, including sensors, modern vehicles, infrastructures, etc., of smart cities to improve traffic predictions and facilitate improved transportation systems. With this method, real-time traffic prediction is made possible in smart cities without sacrificing data security or depending on centralized data storage.

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Primary Subject Area: Deep Learning/Machine Learning

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Submission Files: Decentralized_Federated_Learning_for_Real_Time_Traffic_Prediction_in_Smart_Cities.pdf (320 Kb, Wed, 06 Sep 2023 15:14:01 GMT)

Submission Questions Response: Not Entered

Thanks,

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