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The 2023 International Conference on Digital Image Computing: Techniques and Applications : Submission (2) has been created.

MARUFA KAMAL <marufa.kamal1@g.bracu.ac.bd>
To: Annajiat Alim Rasel <annajiat@gmail.com>

Mon, May 15, 2023 at 5:57 PM

Assalamualaikum Sir,

I am writing on behalf of team-09 from CSE707 Spring 2023. We have earlier submitted our paper before all the deadlines(paper ID:111) to the "4th International Conference on Communication, Circuits, and Systems" and it got accepted. But soon after, we faced difficulties as foreign authors to make the payment. We have explored various options, but unfortunately, none have proven viable in the short amount of time available before the conference payment deadline(14th May) with bank holidays in between.

We have therefore submitted to another conference today, and this is the forwarded receipt email for submission to the "2023 International Conference on Digital Image Computing: Techniques and Applications" for the paper "Federated Learning for Potato Leaf Disease Detection using CNN".

We hope that you will consider our re-submission to the new conference.

Submission by :-

Team-09

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----- Forwarded message -----

From: Microsoft CMT <email@msr-cmt.org>

Date: Mon, May 15, 2023 at 5:32 PM

Subject: The 2023 International Conference on Digital Image Computing: Techniques and Applications : Submission (2) has been created.

To: <marufa.kamal1@g.bracu.ac.bd>

Hello,

The following submission has been created.

Track Name: DICTA2023

Paper ID: 2

Paper Title: Federated Learning for Potato Leaf Disease Detection using CNN

Abstract:

One of the most widely cultivated crops in the world is the potato. The spread of diseases such as potato leaf disease can significantly impact its quality and yield worldwide. Federated learning (FL) is a machine learning technique that enables various parties to collectively train a model without sharing individual data with one another. In the context of potato farming, our research proposes federated learning (FL) to detect potato leaf disease across two clients without sharing sensitive data between them. Each client is trained with the CNN model and its different architectures using their own dataset in this approach. Then the models are aggregated to create a global model and this global model is then used to detect potato leaf disease across multiple farms, improving the accuracy of disease detection and enabling early intervention to limit its spread. For every round of the updated global model, the accuracy of our model has improved significantly. After three rounds of communication using the Inception-V3 model on the server, the accuracy and F1-score were 88% and the precision and recall were around 89% respectively. These experiments were conducted using different custom and pre-trained CNN architectures to understand the improvement in results after collaborating with different datasets.

Created on: Mon, 15 May 2023 11:31:54 GMT

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Primary Subject Area: Machine learning

Secondary Subject Areas: Not Entered

Submission Files: Federated Learning for Potato Leaf Disease Detection Using CNN.pdf (1 Mb, Mon, 15 May 2023 11:30:53 GMT)

Submission Questions Response: Not Entered

Thanks,
CMT team.

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