ABANTI CHAKRABORTY SHRUTI <abanti.chakraborty.shruti@g.bracu.ac.bd>

4th International Conference on Communication, Circuits, and Systems : Submission (111) has been created.

ABANTI CHAKRABORTY SHRUTI <abanti.chakraborty.shruti@g.bracu.ac.bd> Sun, Mar 26, 2023 at 11:22 PM
To: annajiat@gmail.com

Sir,
Please accept my regards. This is the forwarded receipt email for the submission to the conference **4th International Conference on Communication, Circuits, and Systems** for the paper **Federated Learning for Potato Leaf Disease Detection using CNN.**

Submission is done by-
Team no - 09
Group Member:
22366030 Rakib Hossain Rifat
22366033 Marufa Kamal
22366034 Abanti Chakraborty Shruti

Thank you.

---------- Forwarded message ---------
From: **Microsoft CMT** <email@msr-cmt.org>
Date: Tue, Feb 28, 2023 at 10:35 PM
Subject: 4th International Conference on Communication, Circuits, and Systems : Submission (111) has been created.
To: <abanti.chakraborty.shruti@g.bracu.ac.bd>

Hello,

The following submission has been created.

Track Name: Intelligent Computing

Paper ID: 111

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: Tue, 28 Feb 2023 16:35:09 GMT

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Authors:
- marufa.kamal1@g.bracu.ac.bd (Primary)
- rakib.hossain.rifat@g.bracu.ac.bd
- abanti.chakraborty.shruti@g.bracu.ac.bd
- annajiat@gmail.com
- humaion.kabir.mehedi@g.bracu.ac.bd
- ehsanur.rahman.rhythm@g.bracu.ac.bd

Secondary Subject Areas: Not Entered
Submission Files: Federated Learning for Potato Leaf Disease Detection Using CNN.pdf (995 Kb, Tue, 28 Feb 2023 16:33:02 GMT)

Submission Questions Response: Not Entered

Thanks,
CMT team.

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Microsoft Corporation
One Microsoft Way
Redmond, WA 98052