

Two Days International Workshop on Introduction to Federated Learning and Privacy-Preserving Machine Learning with Flower Labs

Date: 12th September 2024 and 19th September 2024

Venue: Online (Zoom)

Overview

The International Workshop on “*Introduction to Federated Learning and Privacy-Preserving Machine Learning with Flower Labs*,” held online in collaboration with the Department of Electronics and Communication Engineering, Amity School of Engineering and Technology, AUUP and Flower Lab, UK, on September 12 and 19, 2024, was a resounding success. Featuring keynote sessions by distinguished experts from the University of Cambridge and Flower Lab, UK including Prof. Dr. Nicholas Lane, Dr. Yan Gao, Dr. Mohammad Naseri, Dr. Heng Pan, and Dr. Javier Fajardo. The workshop provided in-depth insights into the evolving landscape of Federated Learning and its real-world applications. The event witnessed active participation and engagement from students and faculty, made possible by the meticulous planning and dedication of the CSSP Club team under the guidance of Prof. (Dr.) Ashwani Kumar Dubey, Dr. Shubhra Dixit and Dr. Richa Sharma. Special appreciation goes to the entire student organizing team: Mr Piyush Kumar, Ms Pranamika Sharma, Ms Riya Jain, Ms Vanya Taela, Mr Bhumik Yadav, Ms Shanessa Patnaik, Ms Neel Agarwal, Mr Navya Prasad, Mr Arjun Prasad, and Ms Shilpi Sharma of CSSP Club, Deptt of ECE, ASET, AUUP, Noida, India for their outstanding efforts. This workshop not only fostered knowledge exchange but also laid the foundation for future collaborations in the domain of secure and distributed AI technologies.

Distinguished Experts from the University of Cambridge and Flower Lab, UK:

- 1) **Prof. (Dr.) Nicholas Lane**,
Co-Founder of Flower Lab
- 2) **Dr Yan Gao**, Researcher,
Flower Lab, UK
- 3) **Dr. Mohammad Naseri**,
Researcher, Flower Lab, UK
- 4) **Dr. Heng Pan**, Researcher,
Flower Lab, UK
- 5) **Dr. Javier Fajardo**,
Researcher, Flower Lab, UK

The collage displays various materials from the workshop. At the top left is a poster for the 'AMITY UNIVERSITY Flower' workshop, detailing the schedule (Sep 12 and 19, 2024), venue (Online Mode), and a list of keynote speakers: Prof. Dr. Nicholas Lane, Dr. Yan Gao, Dr. Mohammad Naseri, Dr. Heng Pan, and Dr. Javier Fajardo. To the right of the poster is a 'Tutorial Team' section listing five members: Nicholas Lane, Javier Fajardo, Mohammad Naseri, Heng Pan, and Yan Gao. Below this is an 'Organizing Team' section listing ten members: Nicholas Lane, Dr. Ashwani Kumar Dubey, Dr. Shubhra Dixit, Dr. Richa Sharma, Mr. Piyush Kumar, Ms. Pranamika Sharma, Ms. Riya Jain, Ms. Vanya Taela, Mr. Bhumik Yadav, Ms. Shanessa Patnaik, Ms. Neel Agarwal, Mr. Navya Prasad, Mr. Arjun Prasad, and Ms. Shilpi Sharma. The bottom half of the collage shows a Zoom meeting interface with a grid of participants. Overlaid on the Zoom interface are two slides. The left slide is titled 'Privacy and Security in Federated Learning' and the right slide is titled 'ClientApp and ServerApp' and shows a 'Live demo' of the 'flwr' framework being installed and run. At the very bottom is a slide titled 'Challenges of Federated Learning' with two bullet points: 'Labeled data is not always naturally available (users are also unreliable)' and 'Non-IID Data'.