**ICI 2022**

**Workshops**

***I. Title of the workshop:*** AI and Deep Learning using CNN in Cloud

***Workshop organizer:***

Prof. Thuan L Nguyen, University of North Texas, Denton, USA

Thuan L Nguyen finished is a Ph.D. in Information Systems. He has over 20 years of work experience in software engineering and information systems (designing, developing, and administering software, hardware systems in telecommunication, networking, business information systems, and IT industries) and data analytics. He started his research and teaching career, first at the University of Texas at Dallas (UTD) for five years and then University of North Texas (UNT) since 2017. Thuan L Nguyen has developed many new artificial intelligence (AI) graduate courses for the Master of Science program in Advanced Data Analytics, Toulouse Graduate School, the University of North Texas, Texas, USA.

***Abstract:*** The primary objective of this workshop is to demonstrate how to build artificial neural networks and train them to achieve specific goals using TensorFlow and Keras as the core AI frameworks. The knowledge and skills acquired through the workshop can be applied to teaching, learning, and any practical business activity. In this workshop, the attendees will get an introduction to the general artificial neural network, the convolutional neural network, and the TensorFlow AI framework. The attendees also learn the steps in building, training, and testing a deep learning neural network.

**II. Title of the workshop:** Architecture of Event Notifications Systems in a Distributed Environment

**Workshop Organizers:**

Ankush Gulati, Senior Software Engineer, Netflix Inc, USA

Ankush Gulati is a seasoned technologist with over 13 years of experience developing cloud software solutions, with expertise in Distributed Scalable Systems & Content Management Systems. He is currently working on Personalization Systems at Netflix in Silicon Valley, California. Prior to Netflix, he was Lead Software Engineer with Salesforce, San Francisco from 2012 to 2019 and worked on products like Salesforce Einstein Analytics and Salesforce Files. Ankush graduated from State University of New York, Stony Brook in 2011 where he pursued a Master's degree from the Department of Computer Science.

***Abstract:*** In this internet age, technology giants like Google, Facebook, Netflix etc have millions of users using their service at any time of the day. This poses an interesting technological challenge to reliably provide a quality experience to its users at such a massive scale. In this workshop an in-depth architecture analysis of the Rapid Event Notification System will be done that has been built at Netflix by Mr. Ankush Gulati.

**Tutorials**

**Title of the Tutorial:**  Weed detection and management using AI and IOT

**Speakers:** Aniket Mahanti , Department of Computer Science, University of Auckland, New Zeland

Dr. Aniket Mahanti is a researcher, educator, and award-winning author who brings over 15 years of experience designing, measuring, analyzing, and modelling complex distributed systems. Currently, he is a Senior Lecturer (North America: Associate Professor) of Computer Science at The University of Auckland. He received my doctorate in computer science from the University of Calgary, Canada, in 2012. Between 2006 and 2008, he worked as a Research Associate with the Computer Networks group at the University of Calgary. His expertise spans multiple domains such as computer science, social sciences, and business.

**Abstract:** Pastures are an essential resource for the dairy industry, a key sector in the agricultural industry. The main goal of any dairy farmer is to have a productive pasture that can provide nutrients for cattle. One essential factor for quality reduction in any pasture is weed. This tutorial is designed to help researchers in framing solutions to weed management by the use of AI and IOT techniques.