**AIT**
**Asian Institute of Technology**

AIT Extension Program on
# Digital Disruption in Agriculture and Food Industry

## Background

The usual agricultural practices will not be able to feed the World, as demand for agricultural products increases while agricultural land remains limited. In many ways today's agricultural practices are inefficient, with irrigation wasting an estimated 80-90% of the water used and about 40% of farms globally overuse fertilizers and chemicals, leading to harmful effects on soil and water quality, and consequently yield per unit area. Digital Technologies (DTs) can tackle many food production and distribution challenges, such as low productivity, high transaction costs, limited use of inputs and minimal commercialization. Keeping in mind that the Fourth Industrial Revolution (i.e., emergence of ICT or DTs) is behind the disruption in all sectors and industries, agriculture, one of the oldest industries in human history, is also evolving more rapidly than ever. Smart farming technology is a technological solution that aims to create highly added value by integrating existing agricultural technologies with cutting-edge ICT solutions including Internet of Things (IoT), Big Data, Artificial Intelligence (AI), and Drone Technology. AIT Extension Program on Digital Disruption in Agriculture and Food Industry will be a set of independent as well as interconnected training courses (online, face2face, blended), which have been designed to equip you with better understanding, required knowledge and skills on Digital Disruption in Agriculture & Food Industry.

## Learning Objectives:

- Gain a solid understanding of core concepts of Digital Agricultural Technology (DAT) and ICT in agriculture with real world cases.
- Acquire knowledge of the forward-looking technologies and their scope in agriculture – artificial intelligence, remote sensing, crowdsourcing, and big data analytics.
- Learn about precision farming tools and digital tools enhancing on-farm productivity.
- Understand how to empower smallholder farmers through ICT/Digital Tools in market access and financial services.

## Trainers/Facilitators:

- Professors and Researchers from AIT, Professionals and
- Practitioners from International Organizations and Relevant
- Companies/Industries.

## Target Audience:

- Agriculturists,Practitioners, Decisionmakers/Policymakers and Development Partners.
- Those with a responsibility or interest in the intersection of ICT, digital tools and agriculture across the world.
- No prior background in DAT is required.

## Organized by:

**AIT Extension**
Executive & Professional Education

## Registration and Further Details:

Dr. Md. Zakir Hossain, Tel: +66 2 524 5268, Email: zakir@ait.ac.th
Md. Anishur Rahman, Tel.: +66 2 524 5294, Email: anish@ait.ac.th
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## Certificate:

Successful Candidate will be awarded with Certificate (attendance & completion) and Transcript.

## Training Platform:

- AIT Share
- AIT Moodle
- ZOOM
- Online Collaboration Software (for brainstorm, groupwork)
- Virtual Field/Laboratory Visits and
- Demonstrations.

## Fee and Registration:

300 USD per person per course.
Interested participants are requested to communicate or send queries for the Deadline for Registration, Group Registration Fee with/without Credit Card Payment followed by Normal Registration Fee with onsite payment and bank transfer options.

## Note:

AIT Extension has the authority to either postpone or cancel any of the training courses based on the circumstances.

## List of Training Courses:

| No | Schedule | Training Courses | Key-Modules | Modus Operandi |
|----|----------|------------------|-------------|----------------|
| 1 | 14 – 23 Dec 2020 | AI in Agriculture and Food Supply | • An Introduction to Artificial Intelligence (AI) <br> • Relevance of AI in Agri-Business and Food Industry <br> • The Future of AI in Agriculture & Food Industry | • Each of the Courses will be delivered via ONLINE within a duration of 2 weeks period, where the actual contact hours will be 18 hours. <br> • Participants will have opportunity to interact with trainers for 9 hours and the remaining 9 hours will be assisted learning, virtual tour and demonstration. <br> • Rest of the 2 weeks period will be for self-learning. <br> • An exam or assessment will be held at the end of each Course, and participants will have to pass it and be present in all sessions to be qualified for the Certificate/Transcript. |
| 2 | 07 - 18 Dec 2020 | Blockchain in Agriculture and Food Industry | • An Introduction to Blockchain Technology (BCT) <br> • BCT for Agri-Business and Food Industry <br> • The Future of BCT in Agriculture & Food Industry | |
| 3 | 07 – 18 Dec 2020 | Sustainable and Smart Farming using Cutting Edge Technologies and IoT | • Decision Support System for Precision Agriculture <br> • IOT Application in Agriculture <br> • Geospatial Techniques for Precision Agriculture <br> • The Benefits of Smart Farming and how IoT is shaping Agriculture | |
| 4 | 07-18 Dec 2020 | Data Analytics and Agricultural Intelligence | • Digital technologies for big data infrastructure development and analysis <br> • Automation and big data analytics for agricultural transformation <br> • Data analytics for future scenario development on climate extremes and ensure food security | |
| 5 | 14-23 Dec 2020 | Precision Farming and Climate Smart Agriculture | • Impacts of climate change on crops and farmers <br> • Precision Farming (PF) and CSA – principles/pillars, tools and practices <br> • CSA through integrated management approach <br> • Special Topics on PF and CSA: Soil and Crop Monitoring, Digital Agricultural Extension, etc. | |

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