Digital Sustainability Bootcamp

Schedule
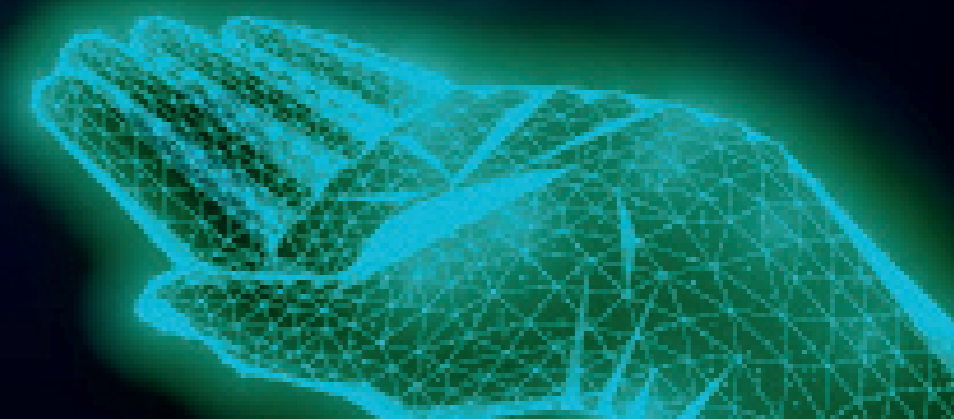
23 August – 10 September 2021

Phygital Edition

In collaboration with

MA
Marzotto Venture Accelerator

Digital Sustainability Bootcamp – Phygital Edition

23 August – 10 September 2021

WEEK 1
IOT FOUNDAMENTALS & ENABLING TECHNOLOGIES

Time		Monday - 23 aug	Tuesday - 24 aug	Wednesday - 25 aug	Thursday - 26 aug	Friday - 27 aug	Saturday - 28 ago
09:00	11:00	OPENING SESSION 10:00am Welcome coffee 10:30am Opening 10:45-13:00 Presentations: Industry Partners	LECTURE - IoT1 **Make objects sense the environment** - Introduction to sensors principles - Transducers - Digital Sensors	LECTURE - IoT2 **Computing with physical objects** - Embedded device architecture - Programming embedded devices - Interfacing embedded devices and sensors	LECTURE - IoT3 **Make objects communicate** - Protocols for data exchange - Data communications models - Programming embedded devices communication	LECTURE - ET1 **Blockchain** - Distributed Ledger - Smart Contracts - Distributed Apps (DApps)	Case-study teamwork
11:00	11:30	Break					
11:30	13:00	Presentations: Industry Partners	LAB (with Tutor)	LAB (with Tutor)	LAB (with Tutor)	LAB (with Tutor)	Case-study teamwork
13:00	14:30	Lunch					
14:30	17:00	TRANSFERABLE SKILLS TRAINING Geraint Wyn Story Self-awareness & Team Working	LAB (with Tutor)	LAB (with Tutor)	LAB (with Tutor)	TRANSFERABLE SKILLS TRAINING Geraint Wyn Story Self-awareness & Team Working	
17:00	17:30	Break					
17:30	19:00	Case-study teamwork	Case-study teamwork	WHY SUSTAINABILITY Dario Quaranta (Yale University)	Case-study groupwork with Industry Partner Tutor	Case-study teamwork	

WEEK 2
AI FOUNDAMENTALS & ENABLING TECHNOLOGIES

Time		Monday - 30 aug	Tuesday - 31 aug	Wednesday - 01 sept	Thursday - 02 sept	Friday - 03 sept	Saturday - 04 sept
09:00	11:00	BUSINESS CASE SOLUTION Emilio Billi (A3Cube)	LECTURE - AI1 **Read and evaluate the data** - Descriptive statistics - Data dependencies discovery - Data visualization	LECTURE - AI2 **Understand data and make predictions** - Unsupervised classification - Supervised classification - Programming classifiers and regressors	LECTURE - AI3 **Making wise choices based on data** - Neural Networks - Deep and Convolutional Neural Networks models - Reinforcement and Transfer Learning	LECTURE - ET2 **Cloud Services for IoT and AI** - Cloud Systems for IoT - Cloud Systems for AI - IoT-AI cloud closed loop	Case-study teamwork
11:00	11:30	Break					
11:30	13:00	LAB (with Tutor)	LAB (with Tutor)	LAB (with Tutor)	LAB (with Tutor)	LAB (with Tutor)	Case-study teamwork
13:00	14:30	Lunch					
14:30	17:00	TRANSFERABLE SKILLS TRAINING Geraint Wyn Story Project Management & Creativity	LECTURE - AI&ETHICS Raja Chatila The path to governance and regulation	LAB (with Tutor)	LAB (with Tutor)	TRANSFERABLE SKILLS TRAINING Geraint Wyn Story Project Management & Creativity	
17:00	17:30	Break					
17:30	19:00	Case-study teamwork	Case-study teamwork	BUSINESS CASE SOLUTION Andrea Fratini (Acea)	Case-study groupwork with Industry Partner Tutor	Case-study teamwork	

WEEK 3
HACKATHON

Time		Monday - 06 sept	Tuesday - 07 sept	Wednesday - 08 sept	Thursday - 09 sept	Friday - 10 sept
09:00	11:00	SUSTAINABILITY CHALLENGES Nada Chahadi (Cambridge Circular Economy Centre)	TRANSFERABLE SKILLS TRAINING Geraint Wyn Story Presentation Skills	INTEGRATING SUSTAINABILITY INTO THE ORGANISATION Nada Chahadi (Cambridge Circular Economy Centre)	TRANSFERABLE SKILLS TRAINING Geraint Wyn Story Presentation rehearsals and feedback	Case-study teamwork
11:00	11:30	Break				
11:30	13:00	TECHNOLOGICAL NEUTRALITY & ENERGY TRANSITION Barbara Terenghi (Edison)	Case-study teamwork	Case-study teamwork	Case-study teamwork	
13:00	14:30	Lunch				
14:30	17:00	LAB (with Tutor)	LAB (with Tutor)	LAB (with Tutor)	LAB (with Tutor)	Group Presentations & Jury Pannel
17:00	19:00	Case-study teamwork	Case-study teamwork	FIRESIDE SESSION an open conversation with David Woon (Continental-NTU Corporate Lab)	Case-study groupwork with Industry Partner Tutor	