BOOTCAMP 2024

IoT & AI FOR FRUGAL INNOVATION

Community-centred innovation
Tech for good
Circular economy
Sustainable production

UCBM ACADEMY



6TH Edition

26 AUGUST – 13 SEPTEMBER 2024

Jesus College Cambridge (UK)

WHAT IS THE BOOTCAMP?

An intensive 3-week programme of **lectures, labs and project work** to acquire technical skills and soft skills based on **industry use cases**. Tutoring and teamwork are essential parts of this team learning journey.

WHERE IS THE BOOTCAMP?

The Bootcamp is a **full-immersion experience** held at **Jesus College at the University of Cambridge**. This prestigious location allows participants to be in the centre of Cambridge close to all amenities.

WHAT ARE THE LEARING OUTCOMES?

By the end of the Bootcamp, participants will be able to:

- Apply the main tools and methos of IoT and AI to real industry use cases
- Work in a diverse group of people to ideate, develop and present a solution to industry partners
- Improve and use their soft-skills in terms of team work, presentation skills and effective communication

A full-immersion experience learning by doing together.



Jesus College Cambridge

Bootcamp Scientific Director
Prof. Leandro Pecchia

PROGRAMME

Designed in collaboration with **academics and professionals**, this is a short and effective **3 week course** based on **experiential learning and practical activities**. Click **here** for the full program.

WEEK 1	WEEK 2	WEEK 3
Artificial Intelligence Fundamentals	**IoT Fundamentals and Enabling Technologies**	**Hackathon**

The 120 hour programme includes:

Tech Lectures (IoT & AI)	Team Project Work	Business Lectures
Tech Labs with tutors	Transferable Skills Training	AI and Ethics



Academic Tutors
Guide all the labs after each lecture to ensure participants' learning



Industry Tutors
Help the teams with their work to ensure the successful completion of projects



Transferable Skills Training
Communication and presentation skills, project management, leadership and teamworking skills;



Business Studies
Benchmarking and Business Modelling.

ENTRY REQUIREMENTS

The Bootcamp is designed for **students, researchers and professionals** who want to have a **multi-disciplinary experience** and **want to acquire IoT and AI skills** in close contact with industry partners.
To enroll in the Bootcamp, we strongly recommend that participants have:

- B2 level or higher of English
- basic computing skills and familiarity with at least one programming language.

Please refer to the **Registration Guidelines on Bootcamp 2024** for the application procedure.

INDUSTRY USE CASES

We believe in **project-based learning**. The programme is entirely built on use cases provided by our industry partners. Participants work in teams to find **innovative solutions to real problems**.



Workers health and safety in low/no connectivity contexts or high-risk environments

Ensuring worker safety in remote, high-risk environments with limited connectivity and/or limited resource settings impedes real-time monitoring of conditions, equipment, and health, increasing the risk of accidents and injuries. Innovative solutions are needed to provide timely insights and interventions for hazard prevention and worker protection.



Agriculture on the Edge: sustainable water usage in developing countries

In underdeveloped contexts, agricultural water efficiency is critical yet challenging due to limited resources and environmental stressors. Developing IoT and AI solutions to optimize water usage while maximizing crop yields even in areas with low/no connectivity is essential for food security and sustainable development.



Predicting blood pressure from photoplethysmography signals: a personalised medicine approach

Current methods for monitoring vital signs like blood pressure are often cumbersome. This project tasks participants with creating compact, user-friendly AI enanced wearable devices that can be integrated seamlessly into daily routines.

PITCH DAY

During the final **Pitch Day** on the 13th September each team will present their solution to a **Jury Panel** of industry experts. The team presentations will be followed by a formal **Gala Dinner** and the **Award Ceremony**.



LEANDRO PECCHIA
Scientific Director
UCBM



CLAUDIA PEVERINI
Program Director
UCBM



ROSSELLA FERRERI
Administration
Manager
UCBM Academy

FACULTY



ALEXANDRE KABLA
Department
of Engineering,
University
of Cambridge



KINDA KHALAF
Khalifa
University



PIETRO LIÒ
Computer Science,
University
of Cambridge



FLORA MACLEOD
IBM



DAVIDE PIAGGIO
University
of Warwick



GERAINT WYN STORY
Transferable
Skills Training,
Cambridge
Associates

ADVISORY BOARD



ROHIT AIL
Samsung



EMILIO BILLI
A3Cube



GIANNI CAVALLINA
Intesa Sanpaolo



PAULA CURRAS
Medtronic



LUCA DI PIRAMO
IBM



GIUSEPPE FICO
Universidad
Politécnica de Madrid,
EAMBES



DAVIDE GUERRI
Dedalus



EUGENIO GUGLIELMELLI
UCBM



RATKO MAGJAREVIĆ
IFMBE



SALVO MIZZI
Recordati



DANILO PAU
STMicroelectronics



JORGE POSADA LÒPEZ
Medtronic



ANTONELLA RUBICCO
A3Cube



ELISA ZAMBITO MARSALA
Intesa Sanpaolo

COSTS

	UCBM	Regular
Course only	€ 2.800,00	€ 3.800,00
All inclusive	€ 4.000,00	€ 5.000,00

SCHOLARSHIPS

For eligibility requirements and scholarship application procedure, please refer to the **Scholarship Guidelines on Bootcamp 2024**.

We particularly welcome applications from international participants and women in STEM.

PARTNERS

a³cube · Dedalus · IBM · Intesa Sanpaolo · Odin · Warwick The University of Warwick, Biomedical Engineering Institute · ST · Recordati

ENDORSED BY

IFMBE · European Alliance for EAMBES Medical and Biological Engineering & Science · IEEE Sensors Council Italy Chapter

For more information contact us at bootcamp@unicampus.it

HTTPS://WWW.UNICAMPUS.IT/IOT-AND-AI-FOR-FRUGAL-INNOVATION-2024/