

# BOOTCAMP 2024

## IoT & AI FOR FRUGAL INNOVATION

Community-centred innovation  
Tech for good  
Circular economy  
Sustainable production



UCBM  
ACADEMY



6<sup>TH</sup> 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?

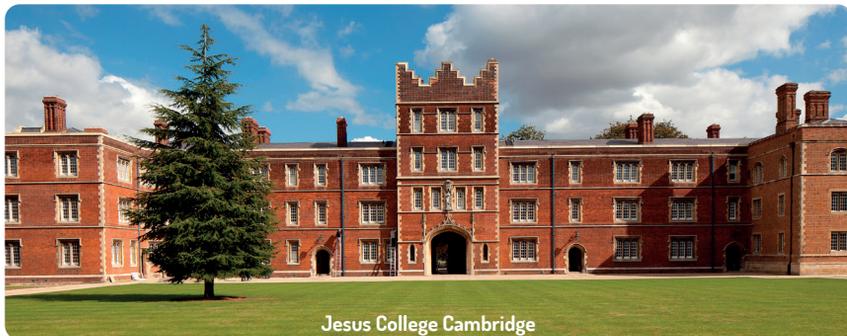
The Bootcamp is a **full-immersion experience** held at **Jesus College at the University of Cambridge**. This prestigious location allows participants to be in the centre of Cambridge close to all amenities.

## WHAT ARE THE LEARNING OUTCOMES?

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

- Apply the main tools and methods 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

**Artificial Intelligence  
Fundamentals**

### WEEK 2

**IoT Fundamentals  
and Enabling Technologies**

### WEEK 3

**Hackathon**

The 120 hour programme includes:

Tech Lectures (IoT & AI)  
Tech Labs with tutors

Team Project Work  
Transferable Skills Training

Business Lectures  
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 enhanced 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**.



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**GERAINT WYN STORY**  
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**EMILIO BILLI**  
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**ANTONELLA RUBICCO**  
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**ELISA ZAMBITO  
MARSALA**  
Intesa Sanpaolo

## FACULTY

## ADVISORY BOARD

## 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



### ENDORSED BY



For more information contact us at [bootcamp@unicampus.it](mailto:bootcamp@unicampus.it)

[HTTPS://WWW.UNICAMPUS.IT/IOT-AND-AI-FOR-FRUGAL-INNOVATION-2024/](https://www.unicampus.it/iot-and-ai-for-frugal-innovation-2024/)