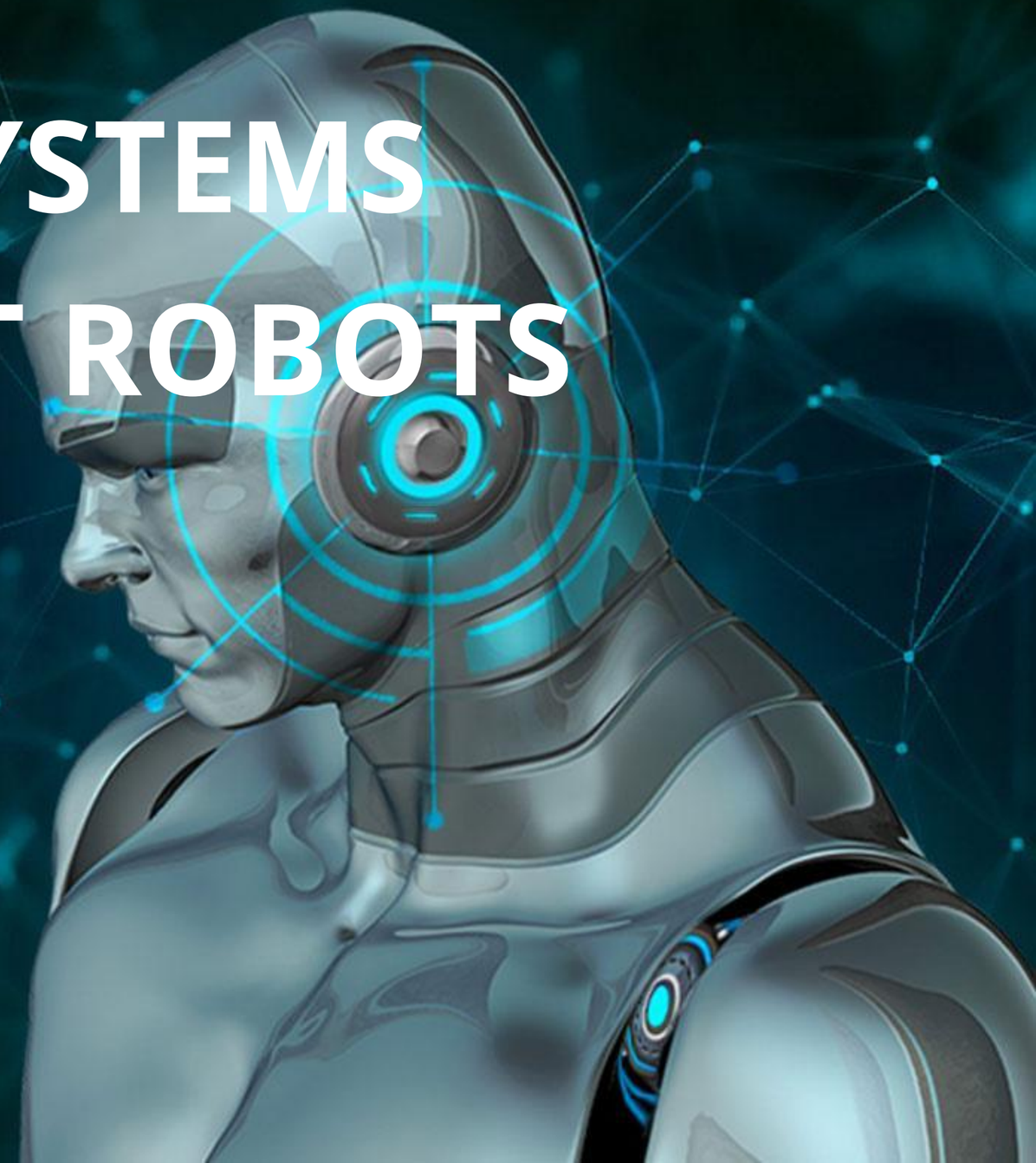
MASTER SCHOOL IN

AUTONOMOUS SYSTEMS AND INTELLIGENT ROBOTS



Professor Davide Brunelli

Program coordinator

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UNIVERSITÀ DI TRENTO

eit Digital MASTER SCHOOL

28 DGTL

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AUTONOMOUS SYSTEMS AND INTELLIGENT ROBOTS

SPECTRO – AUSIR

From self-driving cars to robotic assistants, the Internet of Things, and AI-based software solutions **the future is autonomous.**

The interdisciplinary programme is designed to approach autonomous systems from both a **Computer science** and a **Mechatronic engineering** perspective.

We use a combination of face-to-face workshops, group activities, and hands-on exercises to cover everything from the basics of autonomous systems to such specific skills as:

- Internet of Things (IoT)
- Machine learning / Artificial intelligence
- Robotics
- Automation and control
- Modelling
- Embedded Electronic Systems
- Autonomous software systems

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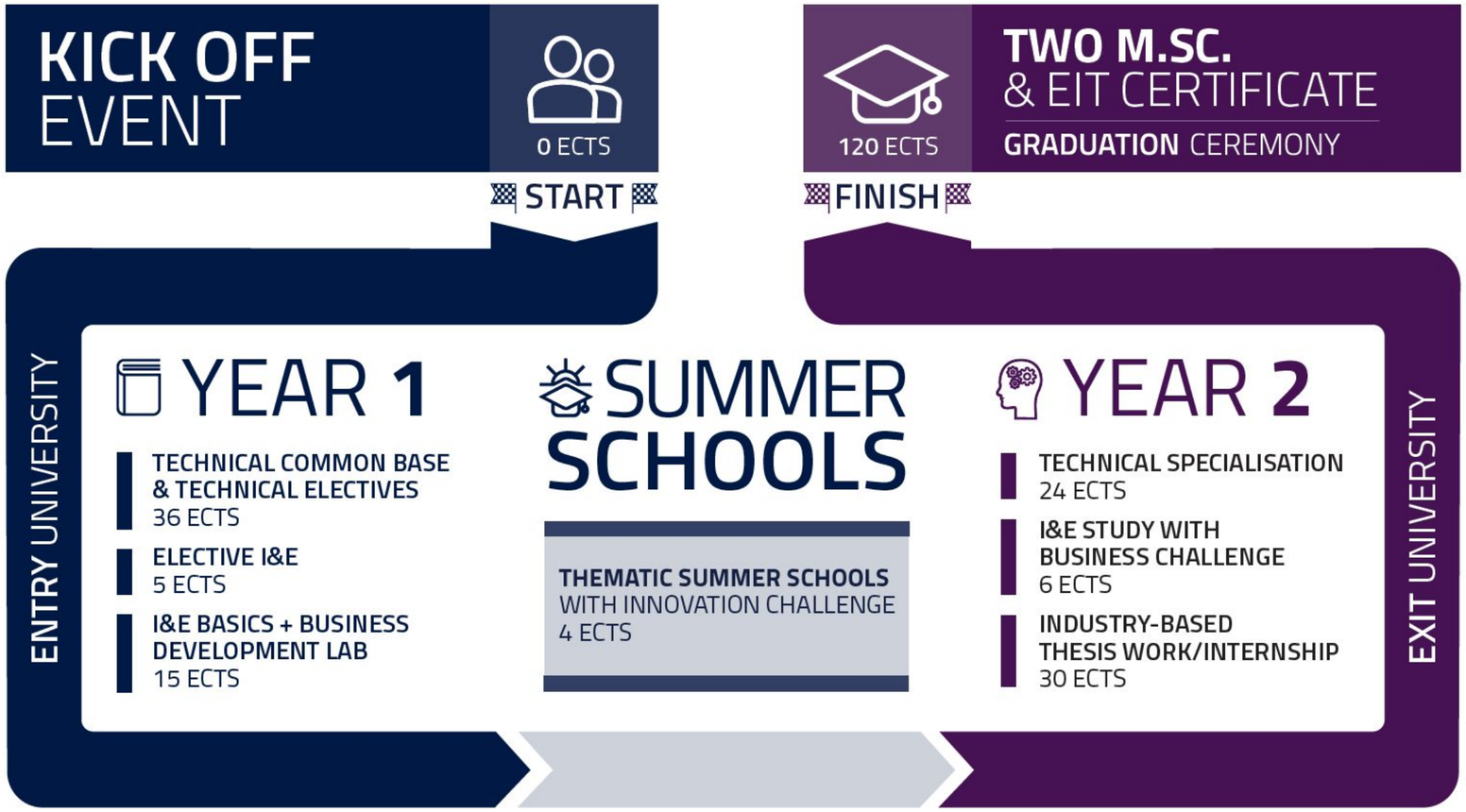
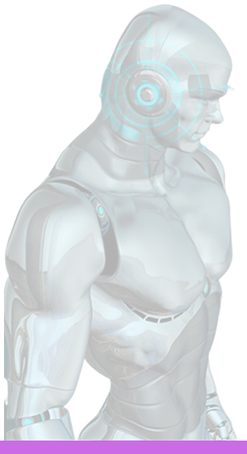
A UNIQUE EUROPEAN EDUCATION SCHEME





https://28digital.eu/eu-collaborations/spectro/

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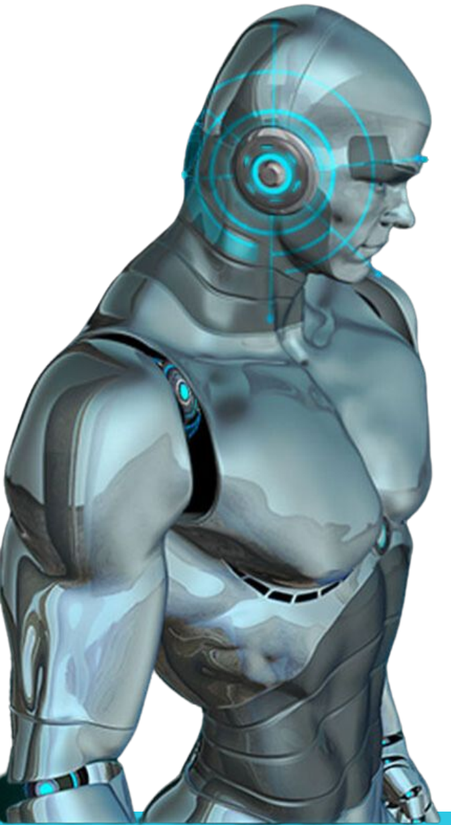
AUSIR PARTNERS



Year 1
Entry University

- Eötvös Loránd University HUNGARY
- KTH Royal Institute of Technology SWEDEN
- University of Trento ITALY
- Budapest University of Technology and Economics HUNGARY
- Université Côte d'Azur FRANCE
- University of Bologna ITALY
- Aalto University FINLAND

AUTONOMOUS SYSTEMS AND INTELLIGENT ROBOTS (AUS)

Year 2
Exit University

- Eötvös Loránd University HUNGARY
- KTH Royal Institute of Technology SWEDEN
- University of Trento ITALY
- Budapest University of Technology and Economics HUNGARY
- EURECOM FRANCE
- University of Bologna ITALY
- Aalto University FINLAND
- Politecnico di Bari ITALY
- University of the Aegean GREECE

Students must choose a different country and university for entry AND exit years

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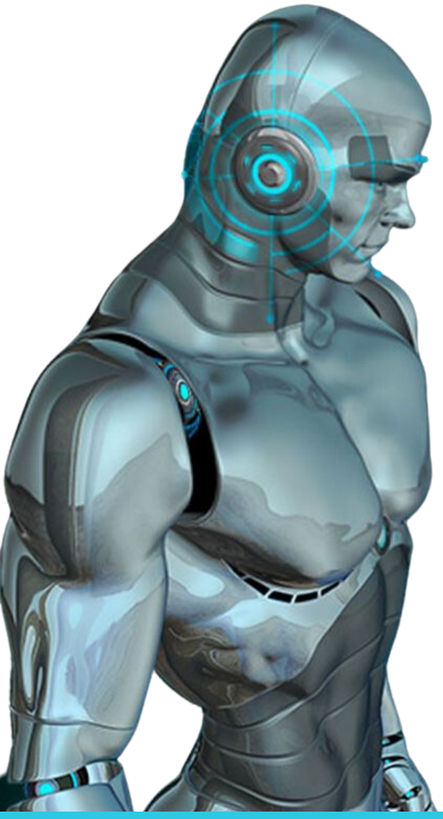
1ST YEAR

at ELTE, UNITN, UCA, KTH, AALTO, BME, UNIBO

CORE COMPETENCES:



- **ROBOTICS**

  How to mathematically model and control a robotic manipulator and related programming techniques. The students will also learn the basics of modelling and control techniques of mobile robots.

- **ARTIFICIAL INTELLIGENCE (OR MACHINE LEARNING)**

  To understand and apply machine learning models and methods, including both supervised and unsupervised learning. After the course, the student will be able to apply the basic machine learning methods to data and to understand new models based on these principles.

- **MODELLING**

  Basic modeling methods, including first principle modeling and data-driven modeling, for both static and dynamic systems. After completing the course, a student will be able to select proper modeling approaches for specific practical problems

- **ESTIMATION**

  Estimation of static systems and state estimation in linear/nonlinear dynamic systems. The student will understand the main concepts in stochastics, estimation and state estimation, the role of uncertainty and is able to implement state estimator in both linear and nonlinear cases.

- **CONTROL**

  Principles of discrete-time control, including basic concept, discretization, properties of discrete time systems, controller design and performance analysis. After completing the course, the student will understand the principles of discrete-time modelling and control, and design, simulate and implement discrete-time controllers.

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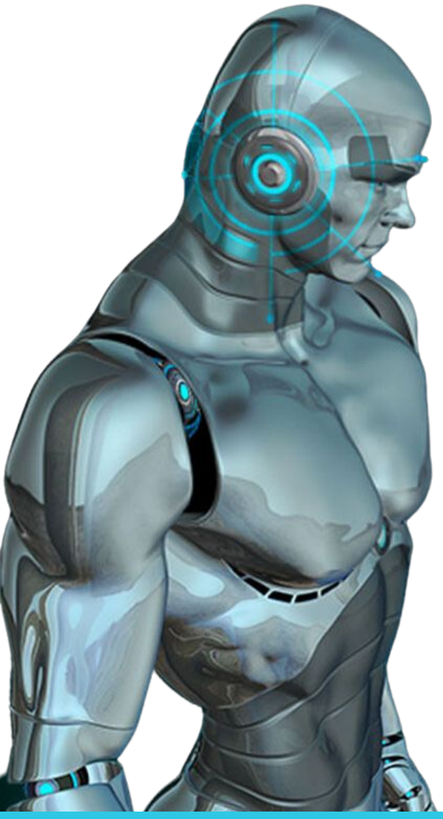
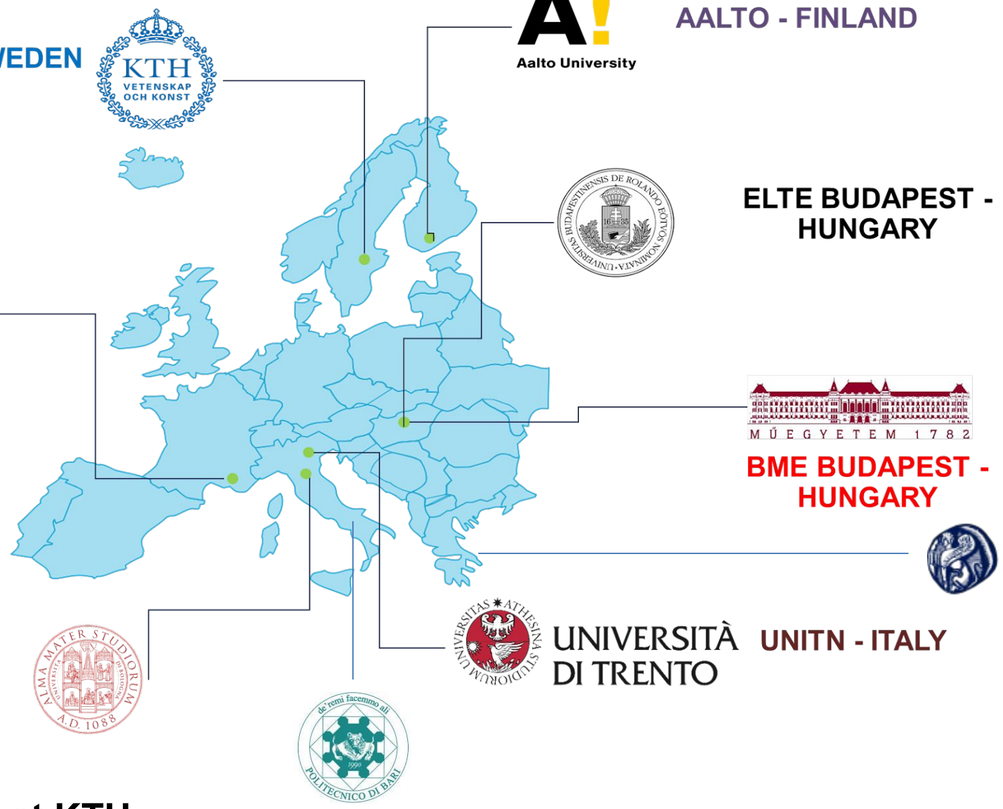
2ND YEAR SPECIALISATIONS:





KTH STOCKHOLM - SWEDEN

AALTO - FINLAND

ELTE BUDAPEST - HUNGARY

EURECOM - FRANCE

BME BUDAPEST - HUNGARY

UNIVERSITY of the AEGEAN

UNIBO - ITALY

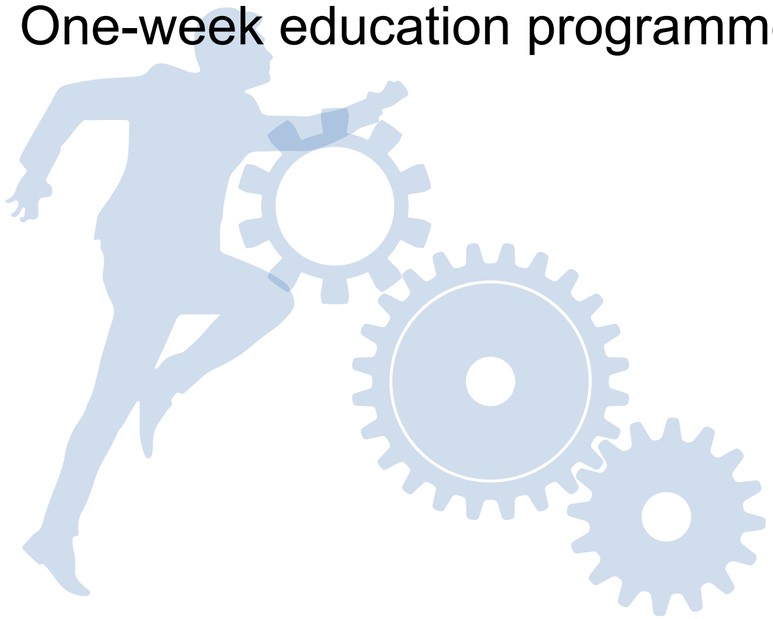
UNIVERSITÀ DI TRENTO

UNITN - ITALY

- Intelligent Robots and Systems at AALTO
- Intelligent Software for Autonomous Systems at KTH
- Intelligent Transportation Systems and Robots at UNITN
- Sensing Big Data for Intelligent Robots at EURECOM
- Autonomous Robots and Vehicles at BME
- Machine learning for Robotics at ELTE
- Autonomous Systems and Robotics for Smart Industry and Intelligent Mobility at UNIBO
- Aeronautical Robotics at POLIBA
- Marine Robotics & Informatics at UAE

INITIATIVES AND OPPORTUNITIES

- Summer Programmes in Digital Innovation & Entrepreneurship
- Summer schools
- Self-standing online modules
- One-week education programmes



Example of 2025 Summer school programme

AI-DRIVEN CYBER SECURITY
Rennes, France
29 June - 12 July, 2025
FULLY BOOKED

UPBEAT SUMMER SCHOOL
Barcelona, Spain
7 - 18 July, 2025
FULLY BOOKED

MARITIME ROBOTICS & INFORMATICS
Syros Island, Greece
18 - 27 June, 2025
FULLY BOOKED

DIGITAL PLATFORMS IN SMART CITIES
Helsinki, Finland
11 - 22 August, 2025
FULLY BOOKED

DIGITAL TECHNOLOGIES & ENTREPRENEURSHIP
Ljubljana, Slovenia
7 – 18 July, 2025
FULLY BOOKED

FINTECH FRONTIER
Madrid, Spain
7 - 18 July, 2025
FULLY BOOKED

GENERATIVE AI FOR START-UPS AND SCALE-UPS
Glasgow, Scotland
18 – 29 August, 2025
FULLY BOOKED

Kick-Off

- All students gather in a European city
  - 2023-24 in Cluj-Napoca
  - 2024-25 in Riga
  - 2025-26 in Bari
- Included in the tuition fee
- Business challenges
- Inspiring speeches
- Networking

Graduation Ceremony

Graduates from all programs meet to celebrate their achievements and receive the EIT Label Certificate in an European city

2023: Madrid

2024: Budapest

2025: Sophia- Antipolis

After graduation

- 83% get a job already within 3 months
- 75% earn more than 40.000 EUR/year (avg. in EU 35.000 EUR/year)
- 120+ start-ups created by EIT Digital Students!

Data from EIT Digital Alumni Survey 2022

Application periods

Period 1: October 31- February 11 2026

Period 2: February 12 – April 15 2026

Period 3: April 16 – June 1 2026

31 October 2025, Application period 1 opens

11 February 2026, Application period 1 closes

31 March 2026, Study offers issued

17 April 2024, Deadline to accept the study offer and pay the registration fee

} Period 1

More details available on:

https://masterschool.eitdigital.eu/admissions

https://28digital.eu/eu-collaborations/spectro/

https://masterschool.eitdigital.eu/autonomous-systems-and-intelligent-robots

Tuition fees

Tuition Fees

EU citizens: 6.000 €/year

Non-EU citizens: 18.000 €/year

Application fee: 75€ (submitting application)

Registration fee: 250€ (to confirm study offer acceptance)

Scholarships

Scholarships are **merit-based**

Application for the
EIT Digital scholarship is done at the same time as the application for the programme.

Scholarships

The available scholarships are:

- ***Scholarships of Excellence (only available to EU applicants)***

  Full tuition fee waiver + monthly allowance
  (based on average living costs in the study country)
- ***Full tuition fee waiver***
- ***Half tuition fee waiver***

You apply for scholarships during the application process in the application portal.

Documents and Application site

REQUIRED:

- Degree Certificate/Diploma or a statement certifying that you are in the final year of your studies
- Official and stamped transcript of records
- Proof of English proficiency
- Curriculum Vitae
- A letter of motivation
- Colour ID (passport or national ID card)

OPTIONAL:

- Document stating the GPA/Relative Ranking
- Recommendation letter
- Relevant certificates
- Link to a 2-minute video

Additional documents might be required by the entry university at a later stage.
Also, see country specific documentation requirements.

https://masterschool.eitdigital.eu/autonomous-systems-and-intelligent-robots

Connect with our student ambassadors

masterschool.eitdigital.eu/community/student-ambassadors/

Contacts

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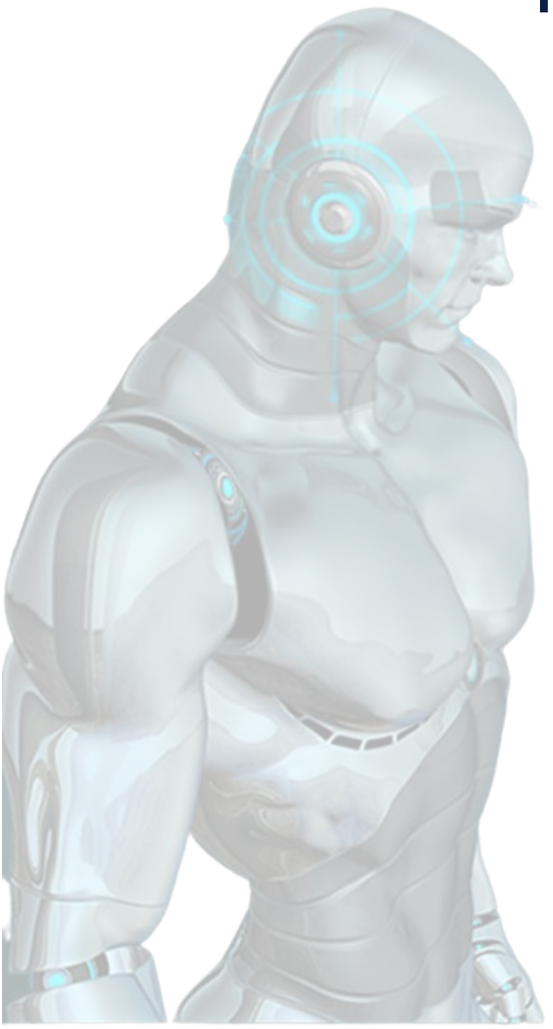
Do you need more information?

https://masterschool.eitdigital.eu/autonomous-systems



eit Digital MASTER SCHOOL

Central Office (applications, scholarships,..)

masterschool@eitdigital.eu

UNIVERSITÀ DI TRENTO

Administrative Staff at University of Trento

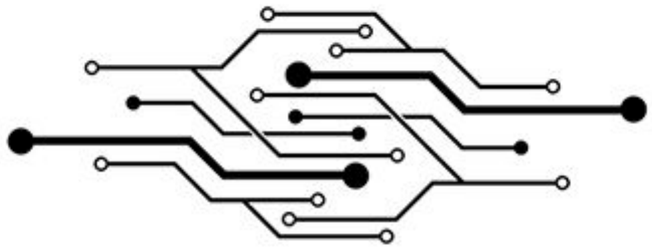
eitmaster@unitn.it

Autonomous Systems and Intelligent Robots

The program "Autonomous Systems and Intelligent Robots" is developed and delivered under ***EU Digital Europe Programme***
Project no. 101123118 - SPECTRO

The consortium includes:

- *EIT Digital/ 28Digital coordination*
- *12 higher education institutions*
- *7 different countries*
- *2 innovative SMEs*
- *1 leading research centre in Information Systems*



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THANK YOU