



# DeCAIR NEWSLETTER

First Issue – March 15<sup>th</sup>, 2022

## Developing Curricula for Artificial Intelligence and Robotics

## 2021-2024

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Project Facts	
Туре:	Erasmus+ Programme
Grant Holder:	The University of Jordan (UJ)
Duration:	Three Years
Start Date:	15 <sup>th</sup> January 2021
UNDER "ERASM	IUS+ CAPACITY BUILDING IN THE FIELD OF HIGHER ED

#### **Project Profile**

DeCAIR is a three-years project that started on the 15<sup>th</sup> of January 2021 and is co-funded by the Erasmus+ programme of the European Union. It is coordinated by The University of Jordan (UJ) with 10 Jordanian, Lebanese, and European partners. The DeCAIR project aims to develop a new MSc program in artificial intelligence and robotics (AIR) at the University of Jordan, a new BSc program in Intelligent Systems Engineering at Tafila Technical University (TTU), and introduce and upgrade AIR courses in the current BSc and MSc programs at the partner Jordanian and Lebanese universities.

The project builds capacities in AIR through transfer of European expertise, academia and industry networking, development of new laboratories in AIR, and strengthening cooperation with local, regional, and European companies to apply AIR technologies.

#### CONTACT INFORMATION

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#### Aims and Specific Objectives of the Project

Recently, artificial intelligence and robotics (AIR) have been making huge advances enabling them to enter new applications, constituting disruptive forces to various aspects of our lives. Developing countries such as Jordan and Lebanon suffer from slowing economies and high unemployment rates. These problems will worsen as AIR technologies succeed in automating more jobs and shifting production and jobs to the countries that employ these technologies to efficiently offer better services and products. Therefore, it is essential for all countries to engage in using and developing these technologies to create new businesses, improve existing products and services, and foster human prosperity. The consortium of this proposal is taking the initiative of "Developing Curricula for Artificial Intelligence and Robotics (DeCAIR)"; a project that intends to develop curricula in the areas of AIR through new master's and bachelor programs. These programs will give students opportunities to specialize in AI technologies, Robotics technologies, or using AI solutions to develop smart and autonomous robots that can solve unconventional problems. Additionally, DeCAIR will improve the curricula of existing masters and bachelor programs in the areas of AIR, establish relevant modern laboratories, and implement modern teaching methods such as flipped learning and project-based learning. All this will improve the graduates' practical skills and enable them to exploit these revolutionary technologies to solve local and regional problems, create new jobs, and to start new ventures. Other project aims are to improve the teaching capacity at universities of the partner countries, build a network of highly qualified professionals in these areas among partner universities, and improve collaboration with local and regional industries and community for applying AIR technologies in solving industry and community problems.

#### **Partners**

P1	Alta TUA	The University of Jordan (UJ), Jordan (Project General Coordinator) Contact Person: Prof. Gheith Abandah	P6	UNIVERSITÀ DI PISA	<b>Università di Pisa (UNIPI), Italy</b> Contact Person: Dr. Lucia Pallottino
P2		Jordan University of Science and Technology (JUST), Jordan Contact Person: Prof. Wafa Batayneh	P7	UNIVERSITÀ DEGLI STUDI DI GENOVA	Universita' degli Studi di Genova (UNIGE), Italy Contact Person: Prof. Francesco Masulli
Р3		Tafila Technical University (TTU), Jordan Contact Person: Dr. Murad Alaqtash	P8	UNIVERSIDAD DE GRANADA	Universidad de Granada (UGR), Spain Contact Person: Prof. Jorge Casillas
P4		Lebanese University (LU), Lebanon Contact Person: Prof. Clovis Francis	Р9	University of Stuttgart	University of Stuttgart (UST), Germany Contact Person: Dr. Peter Eberhard
P5	ຊົມເວລາ ແລະ ເຊິ່ງມີ ແລະ ເປັນ ເຊິ່ງ ເຊິ່	<b>Beirut Arab University (BAU),</b> <b>Lebanon</b> Contact Person: Prof. Soubhi Abou- Chahine	P10	cre thi dev	Creative Thinking Development (CRE.THI.DEV), Greece Contact Person: Dimos Papakonstantinou

# WORK PACKAGES

WP1	Preparation - Surveys and Needs Identification
WP2	Development - Development of New M.Sc. and B.Sc. Programs in AI and robotics
WP3	Development - Implementing the New M.Sc. Program in the University of Jordan
WP4	Development - Implementing the New B.Sc. Program in Tafilah Technical University
WP5	Development - Improving Existing M.Sc. Programs in Jordan and Lebanon by Implementing
	or Including AI and Robotics Courses
WP6	<b>Development -</b> Improving Existing B.Sc. Programs in Jordan and Lebanon by Implementing
	or Including AI and Robotics Courses
WP7	Development - Building capacity in AI and Robotics in universities of Partner Countries
WP8	<b>Development -</b> Establishing AI and Robotics laboratories in universities of Partner Countries
WP9	Development - Implementing modern teaching methods in the M.Sc. programs
WP10	Quality - Quality Assurance
WP11	Dissemination and Exploitation - Collaborating with industry and community
WP12	Dissemination and Exploitation - Results Dissemination
WP13	Management - Project Management

## WP1

### **Surveys and Needs Identification**

#### Duration: M1 – M3

The first work package in the DeCAIR project "*Surveys and Needs Identification*" is concerned with conducting a set of surveying tasks to collect the information necessary to execute the other tasks in the project to achieve its objectives.

#### Achievements

- Surveyed the needs for AI and Robotics expertise and professionals in Jordan and Lebanon.
- Surveyed and evaluated similar AI and robotics master programs
- Surveyed and evaluated AI and robotics courses in similar bachelor programs
- Identified the training needs for staff members in universities of partner countries under three main training categories: namely, Artificial Intelligence, Data Sciences and Big Data, and Robotics.
- Surveyed the needs of facilities and labs equipment and prepared a preliminary list of required items to be procured and a tender call was issued.

Concluding Report Link (260 pages, 9.4 MB)

## WP2

### **Development of New MSc and BSc Programs in AI and Robotics**

#### Duration: M4 – M19

The second work package's objective is to define the structure and design of the curricula for the newly proposed master and bachelor programs to be established in UJ and TTU related to AI and robotics. The WP work is conducted based on the findings that are identified in WP1 report. The work is carried out through two focus groups (one for AI and another for Robotics) formed from experts in their respective fields with feedback from all project partners.

#### Achievements

- Proposed and finalized a curriculum for the BSc Program in Intelligent Systems Engineering at Tafila Technical University.
- Proposed and finalized a curriculum for the MSc Program in AI and Robotics at the University of Jordan.
- Developed and finalized the syllabi for the courses of the above two programs.
- Secured all required approvals for the BSc program and the MSc program reached the final step by the Accreditation and Quality Assurance Commission for Higher Education Institutes.

## WP3

### **Implementing the New MSc Program in the University of Jordan** Duration: M20 – M36

#### WP Status: Not started

The new MSc program in Artificial Intelligence and Robotics is set to start accepting its first students in the First Semester of the Academic year 2022/2023.

## WP4

## **Implementing the New BSc Program in Tafilah Technical University** Duration: M20 – M36

#### Achievements

• The BSc Program in Intelligent Systems Engineering at Tafila Technical University started accepting students on the developed curriculum in the Academic year 2021/2022.

## WP5

## Improving Existing MSc Programs in Jordan and Lebanon by Implementing or Including AI and Robotics Courses

Duration: M3 – M36

The goal of work package five is to improve four existing master programs in Jordan and Lebanon by implementing or including AI and Robotics courses into existing curricula. The work is based on the results of the surveys conducted in WP1. The main aim of this WP is to develop syllabi and content for added and/or modified courses while taking into consideration the work conducted in WP2. All syllabi are designed and reviewed based on feedback from all involved partners.

#### Achievements

- Introduced four new courses in the University of Jordan's MSc program in Computer Engineering and Networks: Applied ML, Applied Data Science, Computer Vision, and Computational Intelligence.
- Introduced the Advanced Robotic course at the Lebanese University MSc program in Robotics and Intelligent Systems
- Introduced four new courses in the Beirut's Arab University MSc program in Computer Engineering: Cognitive Robotics, Computational Aspects of Robotics, Reinforcement Learning, and Autonomous Systems.
- Improved and updated current courses in the MSc program in Mechanical Engineering Mechatronics (JUST), the Robotics and Intelligent Systems (LU), and Computer Engineering (BAU).

## WP6

## Improving Existing B.Sc. Programs in Jordan and Lebanon by Implementing or Including AI and Robotics Courses

#### Duration: M3 – M36

The goal of work package six is to improve existing bachelor programs in Jordan and Lebanon by implementing or including AI and robotics courses into existing curricula. The work is based on the results of the surveys conducted in WP1. The main aim of this WP is to develop syllabi and content for added and/or modified courses while taking into consideration the work conducted in WP2. All syllabi are designed and reviewed based on feedback from all involved partners.

#### Achievements

- The BSc program in Computer Engineering at UJ added and updated mandatory and elective courses in the most recent curricula that support the **Robotics track** such as Computer Control Systems and Mobile Robots, as well as introduced Robot OS (ROS) as a case study in the Modern Operating Systems course.
- The BSc program in Computer Engineering at UJ introduced mandatory and elective courses in the most recent curricula that support the **AI track** such AI and Machine Learning, Computer Vision, Computational Intelligence, Natural Language Processing, and Data Science.
- The BSc program in mechatronics engineering at UJ added the mandatory Robotics Systems Course to their program.
- The University of Jordan of Science and Technology (JUST) updated the AI program track at the Computer Science Department.
- Tafila Technical University introduced and updated a list of AIR-related mandatory and elective courses for three BSc programs at (BSc in Intelligent Systems Engineering, BSc in Computer Engineering, and BSc in Mechatronics Engineering).
- Beirut Arab University (BAU) added Deep Learning and Machine Learning as elective courses to their BSc program and updated their Introductory Programming course.
- The Lebanese University (LU) added the Robotics, Sensors and IoT, and Computer Vision courses to their current BSc program in Electrical Engineering.

## **WP7**

### **Building Capacity in AI and Robotics in Universities of Partner** Countries

Duration: M3 – M31

The goal of this work package is to offer specialized training to faculty members in partner universities on up-to-date topics pertaining to the newly proposed or modified courses offered in the respective MSc and BSc programs. Training entails both the technical aspect of the course and the transfer of knowledge of teaching such topics to students given the experience of European partners. Due to the ongoing pandemic and travel restrictions, all training conducted thus far was mostly online.

#### Achievements

- An online training course on the **Python Programming Language** was organized by the University of Genoa and presented by Alberto Cabri / Vega Research Laboratories (July August 2021)
- An online training course on **Robotic Operating Systems** was organized by the University of Pisa and offered by Alessandro Settimi (November December 2021)
- An online training course on **Introduction to Machine Learning** was organized by the University of Genoa and offered by Stefano Rovetta (February 2022)
- An online training course on **Introduction to Data Science** is organized by the University of Granada and offered by Jorge Casillas (February 2022)

## WP8

## **Establishing AI and Robotics Laboratories in Universities of Partner**

#### **Countries**

#### Duration: M7 – M23

To support the current AIR courses in both the BSc and MSc programs at partner universities, the current labs must be updated with new equipment to support the course and program outcomes. The goal of this work package is to identify which labs must be updated or created, as well as which hardware and software packages must be procured and licensed. The hardware includes computer systems with sufficient computational power to run modern AI applications, specialized development kits to support both AI and Robotic systems, as well as robots and robotic arms.

#### Achievements

- A comprehensive list of required hardware software was finalized.
- A call for tender was announced for the required equipment by UJ for the three Jordanian partners (UJ, JUST, and TTU). Offers were received and studied, and orders for two thirds of the needed equipment were made.
- Two calls for tenders were also announced for new equipment at LU and BAU (Lebanon).

## WP9 Implementing Modern Teaching Methods in the MSc Programs Duration: M22 – M36



The goal of this work package is to implement modern teaching/learning methods such as flipped learning and project-based learning in AIR courses. The work package will identify which modern learning method is suitable for each course. Knowledge transfer in teaching AIR courses at European universities and implementing modern learning techniques will be prime activities in this package.

#### WP Status: Not started

## WP10 Quality Assurance Duration: M1 – M36

Project Quality Assurance aims to ensure that the current project will meet the expected results in the most efficient way, and that deliverables will be reviewed and accepted by the relevant stakeholders. It involves overseeing all activities needed to maintain a desired level of excellence. This includes creating and implementing quality planning and assurance, as well as quality control and quality improvement. The proposed activities for this work package include developing the selection criteria for the master students that will be enrolled in the program, and the national accreditation of the new/modified courses for existing programs. This package will collect relevant information through surveys to monitor the program progress and identify any shortcoming to quickly handle them.



#### Achievements

- All bachelor engineering programs at the University of Jordan had their ABET accreditation renewed for the 2022 2027 cycle.
- Finalized all internal evaluation forms for project meetings, deliverables, syllabi, training, events, and the yearly evaluation forms and the quality control plan.
- Assigned an external auditor evaluator from the EU.
- Conducted frequent surveys and regularly analysed the result and assessed them regarding the quality metrics agreed upon.

## WP11 Collaboration with Industry and Community Duration: M12 – M32

The goal of this package is to organize awareness workshops in Jordan and Lebanon in AI and Robotics, and meetings to streamline problem identification and solution among industry and academia. This will allow for future collaboration between local industries and academia and promote solving real-life problems utilizing the help of academic experts in their respective fields, while offering hand-on experience for graduate and undergraduate students.

#### Achievements

- DeCAIR organized an event in Genoa where AI demos implemented at the University of Genoa were presented. Furthermore, industrial Italian companies and spin-offs operating in the AI field presented their state-of-the-art projects utilizing AI and Robots.
- Currently organizing two workshops involving academia, industry, and partners from the government and wider community to disseminate knowledge about the DeCAIR program, raise awareness, identify best practices in collaboration with industry and community, and plan future paths of collaboration. The workshops are set to take place in Early March (Lebanon) and Late March (Jordan).

## WP12

#### **Results Dissemination**

#### Duration: M19 – M36

To raise awareness about the DeCAIR project, a dedicated website was launched (<u>DeCAIR</u>), as well as social media accounts on <u>Facebook</u>, <u>Instagram</u>, <u>Twitter</u>, and <u>YouTube</u>. This newsletter is the first of a set of biannual planned newsletters to raise awareness of the project and its continuous progress.

## WP13

#### **Project Management**

Duration: M1 – M36

During the kick-off meeting, and the first steering committee meeting, the committee members and project leaders were selected to manage the project plans and tasks, and their roles and responsibilities were defined:

- Steering Committee
- Quality Committee
- Quality Manager
- Project Coordinator
- Work Package Leaders

# Kick-Off Meeting

The kick-off meeting of the "*Development Curricula for Artificial Intelligence and Robotics (DeCAIR)*" project was virtually held on January 19<sup>th</sup>, 2021. During the meeting, DeCAIR General Coordinator, Prof. Gheith Abandah from the University of Jordan, presented a general summary of the project, which included the objectives and importance of DeCAIR. Abandah also reviewed the main stages of implementing the project, the main work packages of the project and their distribution among the partners to guarantee the best possible results. Furthermore, the coordinators of the ten partners gave overviews about their universities and their capabilities, especially in the field of AIR. Thirty-three participants attended the meeting, including representatives from each of the ten partner universities, a representative of the Erasmus Plus office in Jordan, and a representative of the Erasmus Plus office in Lebanon.



# DeCAIR Steering Committee Meetings

As part of WP13, the steering committee meets almost monthly or bimonthly. Since the project start, there has been 10 steering committee meetings. The majority of which were held online. The following are some highlights of these meetings.

#### First Meeting (Feb 16<sup>th</sup>, 2021)

The steering committee coordinated all activities related to WP1. The quality committee was selected, and the quality assurance plan developed. The committee reviewed the development status of the DeCAIR website and social media platforms.

#### Second Meeting (Mar 19<sup>th</sup>, 2021)

The committee studied and analyzed the results of all related surveys related to WP1. These include surveying the facilities, labs, and equipment at the universities of partner countries and assessing preliminary needs and equipment. The committee discussed the results of collected surveys that evaluated the awareness, need, importance and impact of AIR and its adoption among professionals, instructors, and students. It also reviewed the status of current MSc programs and whether they are adequate.

#### Third Meeting (Apr 23<sup>rd</sup>, 2021)

The committee reviewed the plans for establishing AIR labs (WP8), and taking the first steps and planning to develop new MSc and BSc programs (WP2) and improve current ones (WP5 and WP6)

#### Fourth Meeting (May 21<sup>st</sup>, 2021)

The committee reviewed the progress of work done on WP2, WP5, WP6, and WP8. The committee discussed the status update on the formation of equipment committee (EC) and drafted the detailed specifications of equipment needed. The first quality assurance report was presented and discussed.

#### Fifth Meeting (Jun 18<sup>th</sup>, 2021)

The committee reviewed the progress of ongoing work done on WP2, WP5, WP6, WP7 and WP8. It planned the first training workshops and agreed to start online training with Python and ROS courses. The committee discussed proposals on creating and updating current courses for both BSc and MSc programs. It discussed the finalized equipment specifications and preparing the tenders as well as wait for approvals from the Agency. It was agreed to develop and adopt unified templates for suggested course syllabi that will be proposed.

#### Sixth Meeting (Jul 16<sup>th</sup>, 2021)

The committee adopted the unified course templates. The committee discussed the classification of AI and robotics courses and discussed a list of courses that each university needs to add/update. Python training course content agreed upon. The committee agreed to start work on drafting new/modified course syllabi.

#### Seventh Meeting (Sep 17<sup>th</sup>, 2021)

The committee discussed the nomination of an external quality expert and attended his presentation. It discussed the approval process and status of the Jordanian AQACHEI for the MSc in Artificial Intelligence and Robotics to be offered at the University of Jordan. Focus groups and teams were formed to review the

drafted syllabi from each university. The committee discussed the tenders' status and planned the upcoming ROS course. Finally, the committee discussed the evaluation survey of the Python course.

#### Eighth Meeting (Oct 22<sup>nd</sup>, 2021)

The committee discussed the arrangements for holding the next meeting in Jordan. The committee discussed the formation of the subgroups of the AI and Robotics focus groups. The subgroups are responsible for handling all activities of drafting, reviewing, and approving the final course syllabi. The committee drafted plans for visiting the lab facilities at the University of Genoa and preparing a third training course on AI. It discussed the status of the tenders and the number of offers received.

#### Ninth Meeting (Nov 27<sup>th</sup>, 2021)

This meeting is the first meeting taking place in-person and was held in Jordan with the possibility of joining online. The steering committee discussed the status of ongoing work on WP2, WP5, WP7, and WP8. Initial work on WP11 pertaining to the collaboration among academia, community and industry was presented. The committee further discussed the report of the field monitoring visits to Lebanon and Jordan and the details of the upcoming meeting in Genoa.

Also, technical meetings took place where the AI and Robotics focus groups discussed in depth the syllabi developed, offered comments, feedback, and required modifications.

DeCAIR partners visited the University of Jordan and toured the facilities and labs in the Computer and Mechatronics Engineering departments. Visitors also met with senior staff: the VP for Scientific Schools, the Dean of the School of Engineering, and visited the International Affairs Unit (IAU).



#### Tenth Meeting (Feb 2<sup>nd</sup>, 2022)

This meeting is the second meeting taking place in-person and was held in Italy with the possibility of joining online. The technical focus groups finalized the work on WP2, WP5, and WP6 and the final syllabi were approved. Two training courses were agreed to be offered on Deep Learning and Computer Vision. A report on the status of tenders in Jordan and Lebanon was presented. The Quality manager reported the quality assessment results on the previous meeting in Amman, the syllabi development activity, and the ROS course. The plans for the workshops on collaboration with the industry and community were discussed alongside a preliminary schedule for March and April.



# DeCAIR Activity Highlights

#### **DeCAIR Stakeholders Workshop**

As part of the DeCAIR project, which is coordinated by the University of Jordan and funded by the European Union within the framework of Erasmus+ program, a technical workshop for parties that are interested and working in the AI and Robotics domains was virtually held. This stakeholder's workshop was held on Thursday March 4<sup>th</sup>, 2021 through Zoom and included about 70 experts from the public and private sectors, academicians, students, researchers and experts from the project partner countries (Jordan, Lebanon, Italy, Germany, Spain, and Greece).



## DECAIR Participated in the Cluster Meeting with Representatives of Newly Selected CBHE Projects

Represented by the project coordinator Prof. Gheith Abandah, the Cluster meeting titled 'How to ensure better implementation of CBHE projects' was attended on March 8, 2021, at The University of Jordan in Amman.



#### **DeCAIR First Field Monitoring Visit (Lebanon)**

The first field monitoring visit of the DeCAIR project was conducted virtually on October 12, 2021, by the National Erasmus+ Office in Lebanon. The following issues related to the implementation of the DeCAIR project were discussed: Team organization within the project partnership, the various activities that have been carried out and the results achieved, and project impact and visibility in the partner country institutions. Project coordinator, Prof. Gheith Abandah, and representatives from The Lebanese University and Beirut Arab University have also highlighted some of the challenges that have been faced in implementing the DeCAIR project and proactive actions to successfully tackle them.



#### **DeCAIR Second Field Monitoring Visit (Jordan)**

The National Erasmus+ Office in Jordan carried out a field monitoring visit to the DeCAIR project on October 27<sup>th</sup>, 2021 at Tafila Technical University. The members of the project team, as well as the Dean of Engineering and the Director of the International Projects Office at TTU, joined the meeting. During the visit, the project coordinator, Prof. Gheith Abandah, presented an overview of DeCAIR and update on the project progress. The impact and implementation of the project at TTU were presented by Dr. Murad Alaqtash. The monitoring team was pleased to know about the project's progress. Challenges in the project implementation were discussed and recommendations were drawn towards successful achievement of the project's objectives.



#### **DeCAIR** as a Good Practice Example in the Field of AIR

During an invited lecture on "Artificial Intelligence from Philosophic and Practical Perspectives" by Dr. Wassim El Falou, Professor at the Lebanese University, who was invited by the "Lebanese Association for Scientific Research (<u>https://laser-lb.org/en/)</u>", the DeCAIR project was presented as a good practice example in the field of AIR.



## DeCAIR participated in the launch of the second phase of the Erasmus Plus program for the development of higher education

The Secretary General of the Jordanian Ministry of Higher Education and Scientific Research, Dr. Mamoun Al-Debi'e, on behalf of the Minister of Higher Education and Scientific Research in Jordan, Prof. Wajih Owais, inaugurated the activities of launching the second phase of the Erasmus Plus program (2021-2027), which was organized by the Erasmus Plus National Office, through which presenting all opportunities and themes of the program to participants from various ministries and authorities, all Jordanian universities, and a number of local community institutions, non-profit organizations and companies. DeCAIR participated in the launch of the second phase of the Erasmus Plus program for the development of higher education.



#### **DeCAIR participation in the Erasmus+ Phase Two CBHE event**

The Department of Externally Funded Projects / International Affairs Unit at the University of Jordan organized an introductory seminar entitled "*The Mechanism for Writing Capacity Building Projects in Higher Education*" coinciding with the launch of the European Commission's practical guide for the second phase of the Erasmus Plus program for the years 2021-2027. The event took place on December 21<sup>st</sup>, with over 100 representatives from public and private Jordanian universities, representatives of non-governmental organizations and stakeholders were in attendance.

The topics of the seminar varied between an introduction to the practical guide of the Erasmus Program presented by the President of the Euro-Mediterranean Universities Association, Dr. Marcello Scalici, and a review of the priorities of the second phase of the Erasmus Plus program, which was presented by the Director of the Externally Funded Projects Department, Ms. Raham Dannoun, and the mechanism for writing applications and submitting proposals and the criteria for obtaining grants, which were explained by the Projects Director at the Erasmus Plus office in Jordan Ms. Asma'a Al-Smadi.

In the last session, the director of the Erasmus Plus office in Jordan, Prof. Ahmad Abu Al-Heija, the coordinator of the Capacity Building Project in Higher Education, Prof. Ahmad Al-Salaymeh from the University of Jordan, and the Erasmus+ DeCAIR Project Coordinator Prof. Gheith Abanda explained the mechanisms for writing competitive projects with some useful advice in this regard.

In her speech, the Director of the International Affairs Unit, Dr. Hadeel Al-Yaseen, also gave an overview of the participation of the University of Jordan in the first phase of the Erasmus Plus program, and the experience of Jordan in this field. She emphasized the university's interest in building strategic partnerships, and the need to cooperate with partners in various sectors to achieve the university goals of continuous improvement.



#### DeCAIR Participated in Implementing the Course 'Creative Thinking and Security Leadership'

As part of the DeCAIR project cooperation with the Innovation and Entrepreneurship Center at the University of Jordan and the Innovation and Development Center at the Public Security Directorate in implementing the "Creative Thinking and Security Leadership" course, Prof. Gheith Abandah Presented a training session entitled "*The Reality and Future of Artificial Intelligence and Security*." This session covered the following topics:

- Introduction to artificial intelligence and machine learning
- Contemporary artificial intelligence achievements
- The limitations of contemporary artificial intelligence
- The future of artificial intelligence
- Applications of artificial intelligence in the field of public security
- DeCAIR Project: Developing Curricula for Artificial Intelligence and Robotics

#### DeCAIR Project General Coordinator hosted by the University of Jordan Radio

On January 20<sup>th</sup>, 2022, Prof. Gheith Ali Abandah, the general coordinator of the DeCAIR project was hosted by The University of Jordan Radio to discuss AI and the DeCAIR project. This was through an episode of the JU TECH 2 program prepared and presented by Lara A Dahiyat. You can listen to the interview through this <u>link</u>.



#### **DeCAIR Hybrid Meetings and Industrial Presentations in Genova, Italy**

DeCAIR steering committee held its 10<sup>th</sup> meeting (physical and through zoom) at the University of Genoa, Italy between Feb 2<sup>nd</sup> – 4<sup>th</sup>, 2022. The committee discussed and reviewed the ongoing work on many work packages. Participants also attended a series of AI demos implemented in the University of Genoa, as well as presentations from companies operating in the AI field. The presentations and demos included:

- A Low-cost Eye-Tracker Based on Webcam
- Identification of Electronic components on PCB
- AI Applications in the Biomedical field
- Teseo: Deep Tech Solutions for Caregivers Assisting frail and Chronic Patients
- Accenture Industries that offer AI solutions in communications media and technology, financial services, energy, and natural resources
- AlgowATT: Neural System for Landfill Percolation Management
- Bees: Towards Automation of M/EEG Parametric Source Imaging
- SIM4Future: Modeling, interoperable and Serious Games (MS2G) with Artificial Intelligence and Intelligent Agents: A New Approach
- Vega Research Laboratories:
  - AI-Enabled Prognostic Maintenance
  - o Selective Disassembly of Circuit Components for Recycling
  - Traffic Monitoring and Prediction
  - City Security
  - Intelligent team Resource Management
  - DSD D-Health Support for Diabetes
  - Gaze Chaser Early Detection of Cognitive Illness



# Upcoming Events

### March 2022

#### **Collaboration with Industry and Community Workshop - Lebanon**

DeCAIR will be holding a workshop in Lebanon on 2<sup>nd</sup> March that focuses on the best practices in collaboration between academia and industry. Talks delivered from the industry include ones by AI Labs, ITEC Industrial Technologies, Zeenni's Trading Agency among others. The workshop will include a round-table discussion on how to sustain academia and industry collaboration.

#### Introduction to Data Science Training Course

The university of Granada, Spain one of DeCAIR European partners is organizing a 20-hour training introductory online workshop on data science topics from March 14<sup>th</sup>, 2022 – April 6<sup>th</sup>, 2022. The workshop will be given by expert faculty members of the University of Granada: Jorge Casillas, Alberto Fernández, and Salvador García.

#### **Steering Committee Meeting**

DeCAIR will hold its eleventh steering committee meeting on March 22<sup>nd</sup>, 2022.

#### **Collaboration with Industry and Community Workshop - Jordan**

DeCAIR will be holding a workshop in Jordan on 31<sup>st</sup> of March 2022 that focuses on the collaboration between academia, community, and industry. Participants will represent academic and government institutions as well representatives from the local industry. The workshop will include talks, experts-panel discussion, and an open discussion with the participants.

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