

Partner for DIGITAL Skills Pitching session Green Room



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4. Linköping University - Your AI Research Excellence Centre Partner, Fredrik Heintz (SE)
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IU International University of Applied Sciences (IU) Germany : Empower People to Succeed in a Digital World

Martha Geiger, IU International University of Applied Sciences (DE)





iu

INTERNATIONAL
UNIVERSITY OF
APPLIED SCIENCES

Martha Geiger

Martha.Geiger@iu.org

**EMPOWER PEOPLE TO SUCCEED IN
A DIGITAL WORLD**

IU International University – Overview

Our mission:
Empower people to succeed in a digital world by innovative teaching, training & coaching.

Popularity

With **more than 30,000 new students** per year, IU is the largest university in Germany.

Broad portfolio

With more than **150,000 learning hours** and more than **300¹⁾ study programs** ranging from A=AI to U=UX Design.

Disruption of higher education

With new **digital education offerings**, IU revolutionizes modern learning habits.

>85,000 students
largest university in
Germany &
European
ambitions

European ambitions

Expanding our programs to **France, Spain, and the UK** and introducing courses in **French and Spanish**

Experienced team

More than **1,800 professors, freelance tutors and teachers** guide our learners through the practical implementation with up2date content.

Blended learning

Optimal learning mix combining video, audio, text formats, exam questions, personal coaching and blended approach.

... with the right future-oriented course for every learner

Future-oriented offer in 8 course clusters across all formats with >200 bachelor and master courses

- Architecture & Construction
- Design & Media
- Health & Social Work
- IT & Technology
- Marketing & Communication
- Pedagogy & Psychology
- HR & Law
- Economics & Management



Management & Business Administration

- Business Administration (B.A.)
- Digital Business (B.A.)
- Real Estate Management (B.A.)
- Logistics (B.A.)
- New Work (B.A.)
- HR Management (B.A.)
- Tourism (B.A.)
- ...



Marketing & Design

- E-Commerce (B.A.)
- Communications Design (B.A.)
- Marketing (B.A.)
- Media Design (B.A.)
- Online Marketing (B.A.)
- Public Relations (B.A.)
- UX Design (B.A.)
- ...



IT & Data

- Artificial Intelligence (M.Sc.)
- Cybersecurity (M.Sc.)
- Data Science (B.Sc./M.Sc.)
- Informatics (B.Sc.)
- IT Management (B.A./M.A.)
- Media informatics (B.Sc./M.Sc.)
- Business informatics (B.Sc./M.Sc.)
- ...



Engineering

- Architecture (B.Sc.)
- Construction (B.Sc.)
- Industrial Engineer 4.0 (B.Sc.)
- Electrical engineering (B.Sc.)
- MBA in Engineering Management
- ...

**All courses are available in all forms (distance, part-time, dual, blended).
Our modular concept enables courses to be adapted to meet individual needs.**

AU as partner in Master's and skills mapping calls

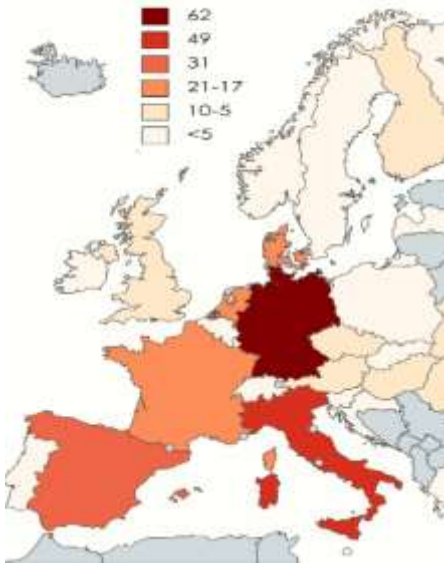
Jacob Sherson - ScienceAtHome, Center for Hybrid Intelligence, Aarhus University (DK)



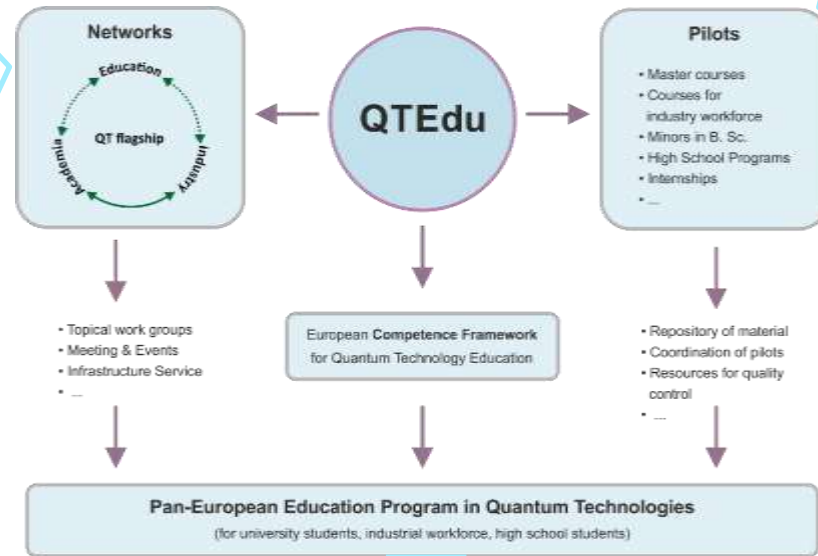
Quantum Technology Education CSA (QTEdu) 2020-2022

Contact: Sherson@mgmt.au.dk

5 working groups
+300 members
36 countries



Proposal: create a master's training proposal benefitting the entire ecosystem.



Master's ecosystem

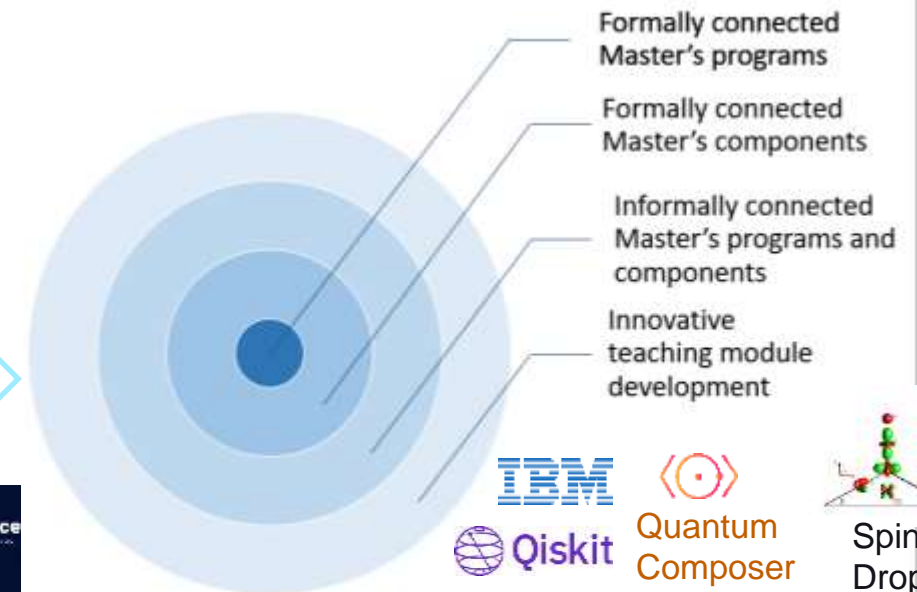
EFEQT:
17 academic and corporate partners
<http://efeqt.eu/>



QTOM
+30 partners
<https://qtom.qtedu.eu/>



+ 9 other pilots



Beyond quantum: Facilitating technological workforce development and ecosystem alignment

Contact: Sherson@mgmt.au.dk

Proposal: adv skills CSA should have a member to exploit synergies w quantum initiatives + broad experience in other fields



QTEdu, '20-'22

- Community
- Repositories
- Competence Framework
- Pilots

QuCats, '22-'25

- Virtual Quantum Training Institute
 - Hands-on, open-source, curated training modules
- European Quantum Education Center
 - Gold-Silver-Bronze organizational accreditation for “quantum readiness”

Quantum workforce

- Broad increase in quantum awareness and agency
- University-industry educational experimentation and alignment
- SME-rich ecosystem for workforce training using VQTI-module recombinations

Other skills related competences (Jacob Sherson)

1) Leads a consortium w +30 researchers and companies exploring human-centered AI

- Combine CS, HCI, management, ethics, legal and many other fields
- Create a “competence framework for AI”

2) Center for hybrid intelligence world leading in game-based assessment of 21st century skills like creativity

<https://www.scienceathome.org/games/skill-lab-science-detective/>
<https://hybridintelligence.eu/crea/>

3) JS is scientific advisor to The Learning Economy - Steward of the Internet of Education; a global network to close the skills gap using digitally interoperable skills certification ia using blockchain



AARHUS UNIVERSITY

DEPARTMENT OF MANAGEMENT

DEPARTMENT OF PHYSICS



ICT Systems Engineering skills are needed for a proficient Master degree in IoT

Ilker Demirkol, Dept. of Mining, Industrial and ICT Systems Engineering , Universitat Politècnica de Catalunya (ES)

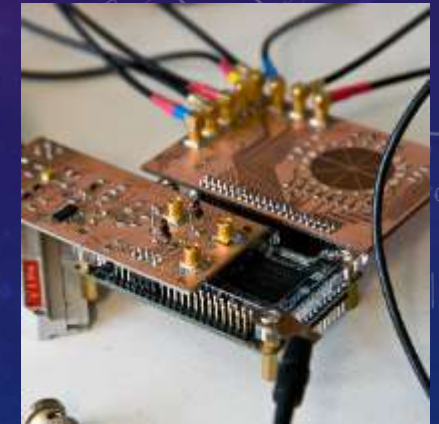




UNIVERSITAT POLITÈCNICA DE CATALUNYA
BARCELONATECH

Department of Mining, Industrial and ICT
Engineering

DIGITAL SKILLS FOR A MASTER DEGREE IN IOT



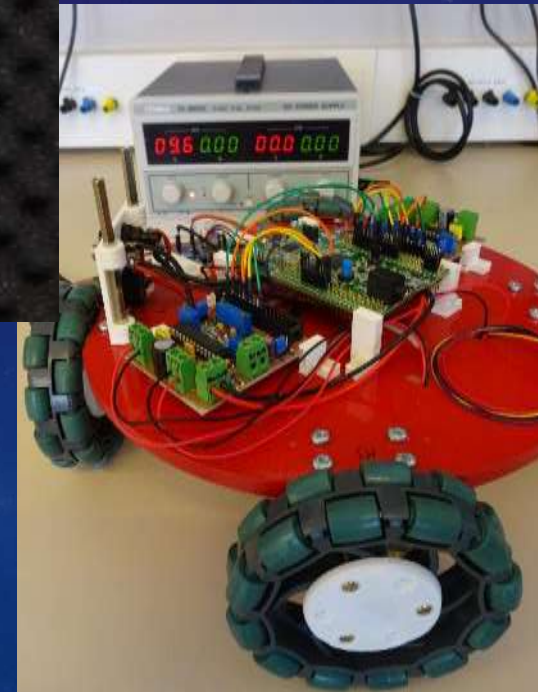
Call: DIGITAL-2021-SKILLS-01-SPECIALISED
Contact: ilker.demirkol@upc.edu



UNIVERSITAT POLITÈCNICA DE CATALUNYA
BARCELONATECH

Department of Mining, Industrial and ICT
Engineering

- Current programmes:
 - BS in ICT Systems Engineering
 - BS in Industrial, Electronics and Automatic Control Engineering
 - BS in Automotive Engineering
 - ...
- Next target:
 - **MS in IoT Engineering**





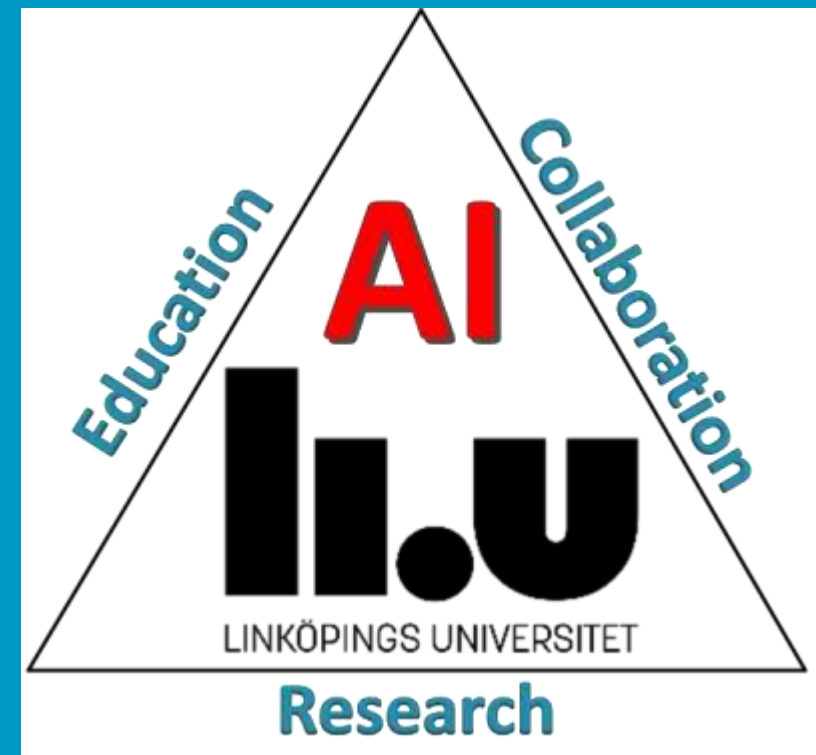
Linköping University - Your AI Research Excellence Centre Partner

Fredrik Heintz, Linköping University (SE)

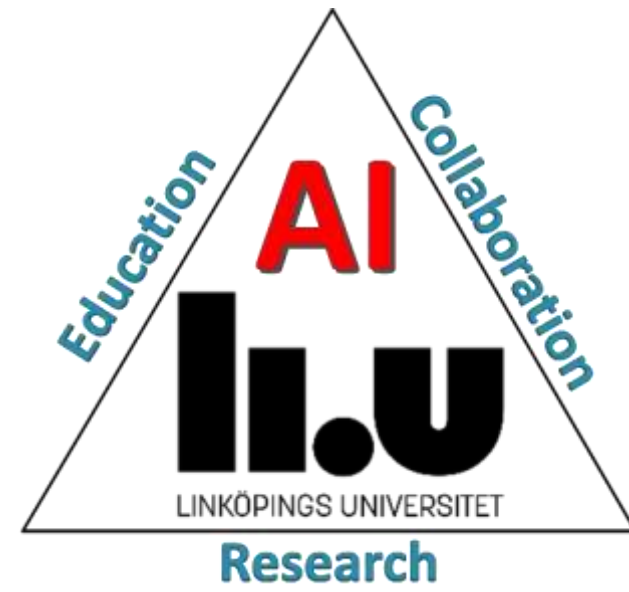
Linköping University (LiU)

– Your AI Research Excellence Center Partner

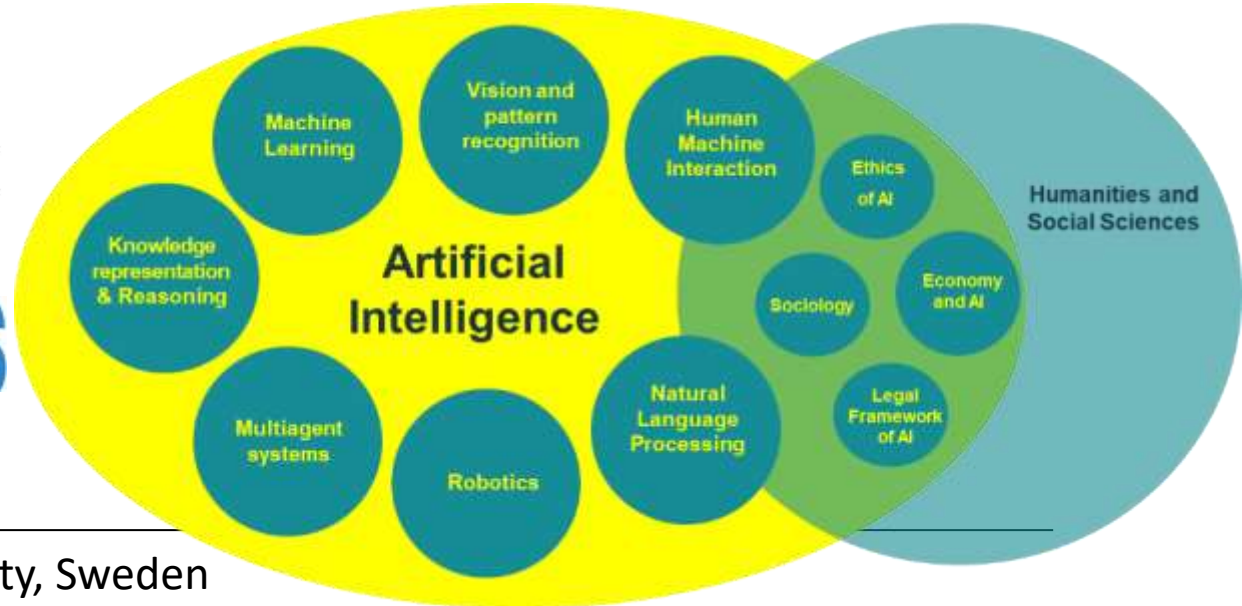
Prof. Fredrik Heintz,
Dept. of Computer Science,
Linköping University, Sweden
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LiU Covers All Aspects of AI in One University

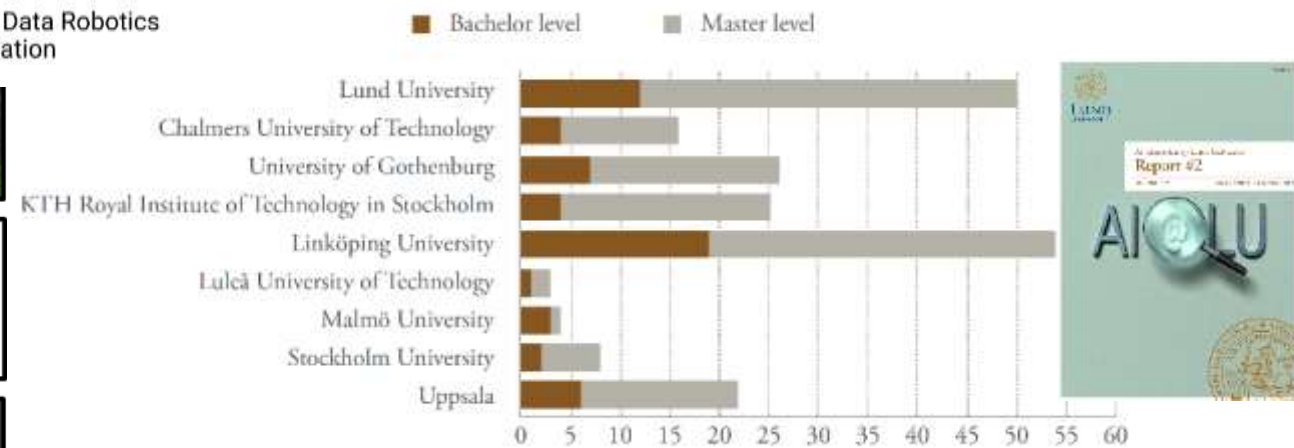


● Elements of AI



Prof. Fredrik Heintz, Linköping University, Sweden
fredrik.heintz@liu.se; @FredrikHeintz

LiU Covers All Aspects of AI in One University



<https://www.ai.lu.se/education/mapping-ai-education-lund-university>

Looking for partners/consortia for

- Advanced Digital Skills Analysis
- Specialised education programmes in AI



Cybersecurity@OUC

*Alexandru Bobe, Ovidius University of
Constanta (RO)*

Cybersecurity@OUC

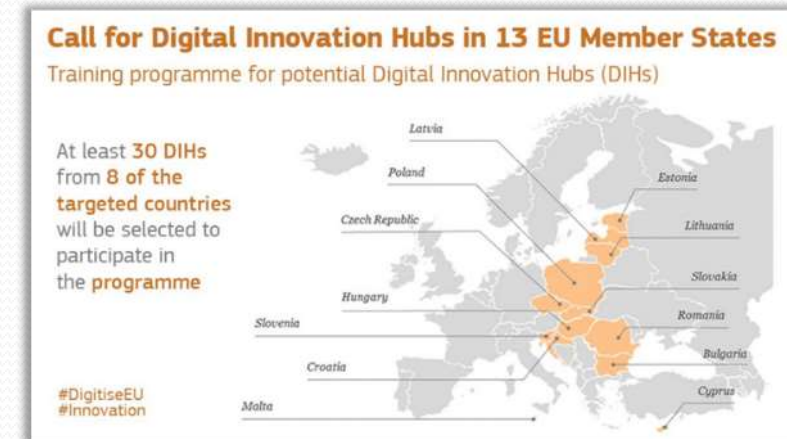


Ovidius University:

- Digital transformation of both SMEs and the public sector

→ *CiTyInnoHub* - Digital Innovation Hub

- 2017 – selected by EU out of 137 DIH applications
- 2019 – Ovidius University with CCINA, Constanta Metropolitan Area Association (ZMC), National Association of Women Entrepreneurs (CONAF), Ernst & Young, Iceberg
- 2020 – selected by Romanian Authority for Digitalization (ADR) to participate in European DIH competition





CyberSkills

- 125 academics trained by EXPERTS from **OUC** & **Romanian Intelligence Service's** National Cyberint Center and **Romanian National Computer Security Incident Response Team**
- 54 high school students
- 250 bachelor students
- 100 master degree students
- 1.000.000 euro for the trainers and events





Umeå University - an attractive partner for developing European Master programmes

Lennart Edblom - Umeå University (SE)

UMEÅ UNIVERSITY

**An attractive partner for developing
European Master programmes**



UMEÅ UNIVERSITY

UMEÅ UNIVERSITY

- The largest university in North Sweden
- 34 000 students, 4300 employees
- The Computing Science department has expanded rapidly the last 5 years and attracted competence in key areas
- Long experience of education on bachelor, master and doctoral level
- Interested in participation in proposals for developing specialised education programmes (master level) in key capacity areas



UMEÅ UNIVERSITY, COMPUTING SCIENCE

Qualifications

- Research on European top level in Artificial Intelligence, High Performance Computing, Cybersecurity, Autonomous Distributed Systems, participation in several FP7 and H2020 projects
- Experience from coordinating ITN projects (Doctoral Networks) and from Erasmus+ (framework for Trustworthy AI)
- Already running national Master programmes in Artificial Intelligence and Computer Science

Contact: Lennart Edblom, edblom@cs.umu.se

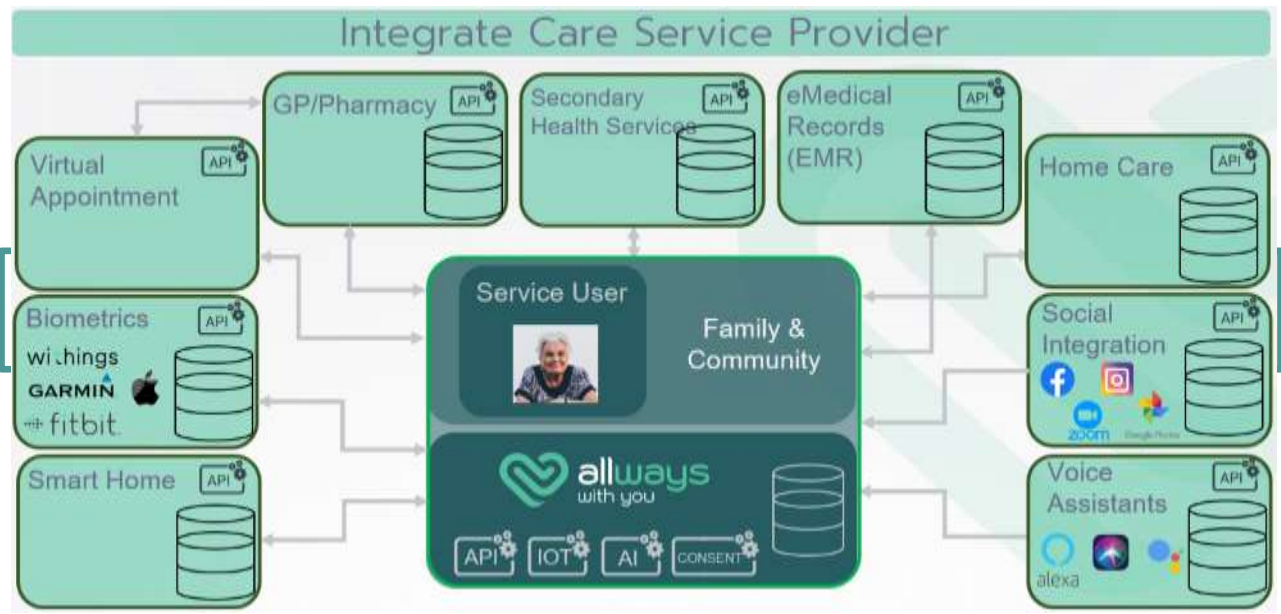




Allwayswithyou – An Integrated Care Platform

Ger O’Keeffe – Allwayswithyou (IE)

Allwayswithyou – Integrated Care



- ### Key Benefits
- Service user **retains ownership** of their data
 - Timely **personalised insights & recommendations**
 - Biometric visualisation**
 - Medication** schedule & adherence
 - Easy to use **Virtual Consultation**
 - Biometric summary** available to care team
 - Reminiscence Therapy
 - Integrated **Video calling**



Solution Overview:

Allwayswithyou enhances the delivery of both social and health care services with a goal of extending the health & wellbeing of the service user in their own home.

We achieve this by integrating with multiple services including medication, biometrics, virtual consultation, social & other services.

The platform ingests data from these services, this data is normalised, analysed and visualised.

An AI engine is used to run trend analysis and anomaly detection.

Biometrics Include:

- Temp ; Pulse / BP; SpO2
- ECG / Irregular heart beats
- Steps / Floors
- Weight / BMI
- Sleep
- Food / Fluid intake
- Freq urinary/bowel output
- Pain level
- Cognitive

Home Kits:



Sample kit only.
withings fitbit GARMIN



Advanced Digital Skills for the real world

Ana-Maria Stancu - Bucharest Robots (RO)

Digital skills for real world

Services provided by the company

Robots – integration, applications for robots, service

IoT (Internet of Things) – data collection, drone surveillance

Big Data Analytics – data analysis, data training (Machine Learning)

RPA (Robotic Process Automation)

Precision agriculture and autonomous tractors

Research & Development

Trainings provided by the company

- Trainings on automation and robotics
- Consultancy on analysing the potential of automation
- Robotics and programmatic classes





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- **RPA presentation and business cases**
- **Service robots trainings business cases**
- **IoT business cases**
- **Entrepreneurship in robotics**

BUCHAREST
PROMOROBOTS



BUCHAREST
PROMOROBOTS



Data intensive and open science: A signal for advanced digital skills in the R&I ecosystem

Natalia Manola – OpenAIRE (GR)

Digital skills for Data intensive and Open Science (FAIR) in the R&I ecosystem

Natalia Manola

OpenAIRE CEO

Athena Research & Innovation Center

Digital skills in R&I: **Some facts**

- **Open science and data intensive science** are becoming the new **norms** in performing research
- **FAIR** research data and software, a key enabler for AI, are in the centre of national open science policies
- Research institutions are **investing in upskilling** researchers and personnel towards an advanced digital workforce
- **Cross-sectoral data** demands and **cross-sector transferable skills** are of key importance: academia-industry-public agencies
- **European Open Science Cloud** builds a pan European digital skills infrastructure which connects national, thematic and institutional **competence centres**

OpenAIRE for digital skills & training

- A European e-Infrastructure with **37 national nodes** with a key role in the upskilling and training at university level
- An integral part of the **European Open Science Cloud**
 - Learning material and courses on open science
 - Learning Management Platform to be used by 15 members
 - EOSC Knowledge Hub
 - Train the trainers programmes
- In the making
 - **Digital profiles** for data stewards, data librarians, data scientist/data analyst, data infrastructure professional, (open) research communicators
 - **Certification** schemes for training material and people

THANKS

Contact us to build synergies

3
3

Location

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[@nataliamanola](https://twitter.com/nataliamanola)



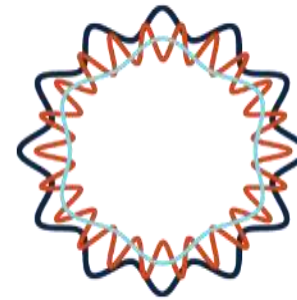


Cyber-Skills Building Europe's Cybersecurity Skills

Donna O'Shea - *Cyber-Skills @ Munster
Technological University (IE)*

Initiative Overview

Innovative approach to programme design, create, empower, facilitate



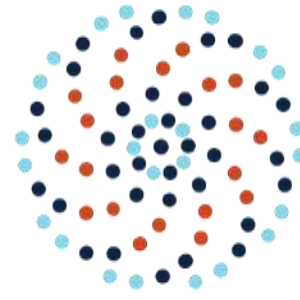
Create

Create Innovative, Enterprise focused and Research informed cybersecurity courses through **meaningful collaboration**.



Empower

Empower Learner to design their own **courses** and take their own pathways with straightforward articulation and progression routes



Facilitate

Facilitate new learning pathways using micro credentials and by capturing learning through **e-Portfolios**.

Cybersecurity for I4.0/CPS

Key Points

Address the **negative gap and availability** of advanced digital skills in cybersecurity in the EU.

Improve learners' **metacognitive skills** increasing student's ability in being able to link technical knowledge to fundamental theory.

Pool resources and expertise in cybersecurity that transcends national boundaries between EU member states.

Integrate a **tripartite model of collaboration** between industry, academia, and government.



WWW.CYBERSKILLS.IE

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Find more information and sign up for
the DIGITAL Collaborative group



THE HOME OF DIGITAL SKILLS IN EUROPE

www.digitalskillsjobs.eu

 @DigitalSkillsEU

 Digital Skills EU