TRANSFORM4EUROPE WEEK

AT THE UNIVERSITY OF ALICANTE

ALICANTE, 8-10TH MAY 2023

We invite students of all the Transform4Europe partner universities to take part in the Transform4Europe Week at the University of Silesia in Katowice.

The topic of the event is **"Digital Transformation".** Societal digital transformation refers to the integration of digital technologies and tools into various aspects of society, including businesses, government, education, and healthcare. It involves the adoption of digital technologies such as cloud computing, big data analytics, artificial intelligence, the Internet of Things (IoT), and blockchain, to enable more efficient and effective ways of working and delivering services to the public.

Societal digital transformation has the potential to revolutionize various sectors and improve the quality of life for people. For example, in healthcare, digital technologies can help healthcare providers deliver more personalized and efficient care to patients through telemedicine, remote monitoring, and electronic health records. In education, digital technologies can enable remote learning and provide access to educational resources for people in remote areas.

However, societal digital transformation also poses significant challenges, such as the potential for job displacement, data privacy concerns, and the digital divide, where certain groups may not have access to the necessary technology or skills to participate fully in a digital society. Therefore, it is crucial to address these challenges and ensure that the benefits of digital transformation are accessible to all members of society.

Students can choose from the following four **workshops** (see detailed workshop description attached) that will take place on 9th and 10th May at the University of Alicante:

1. **Become a Knowledge Entrepreneur**
   Workshop teachers: Theresa Zimmer and Niklas Geroge, University of Saarland

   The workshop "Become a Knowledge Entrepreneur" is aimed at students of each Transform4Europe partner university. The workshop will be conducted in two days. In the workshop, participants reflect on their own knowledge, skills and abilities and discuss networking strategies. These strategies are then used to develop initial ideas on how to advance social, ecological, and digital transformations.

2. **From data to knowledge**
   Workshop teachers: Jose Norberto Mazón Lopez and David Tomás Díaz, University of Alicante

   This workshop provides an overview of the knowledge discovery in databases pipeline, that is, the process of discovering useful knowledge from large collections of data.

   After completion of this workshop the student should be able to:
   - Understand the concept of big data scenarios and their relationship with the latest technologies (e.g. IoT and Artificial Intelligence).
   - Understand technological and legal issues of open data (formats and licenses).
   - Identify opportunities and benefits of reusing open data, as well as data sharing between private and public entities.
   - Understand the fundamental concepts of data mining, including its definition, purpose, and applications in various fields.
   - Describe the various stages of the data mining process, including data collection, preparation, modelling, and evaluation.
   - Apply exploratory data analysis techniques, including central tendency measures and visualisation, to gain insights into the data and prepare it for modelling.
   - Apply machine learning algorithms such as support vector machines, decision trees, and neural networks, to build predictive models and evaluate their performance.
   - Understand the principles and techniques of text mining.
   - Apply text mining techniques to analyse text data, such as customer reviews, and news articles.

3. **Introduction to Music Information Retrieval**
   Workshop teachers: Jorge Calvo Zaragoza, José Javier Valero Mas, María Alfaro Contreras and Juan Carlos Martínez Sevilla, University of Alicante

   This workshop aims to make the Music Information Retrieval (MIR) field known both to the general public and to those interested in a possible career path, whether research or industrial. We will cover many aspects, both from conceptual and technical points of views, related to the field in general but also on specific tasks (music classification, audio transcription, automatic composition, etc.). We will naturally integrate in the lectures the tools typically considered for building MIR systems, such as artificial intelligence and signal processing.

   The workshop is addressed to any student interested in the intersection between music and technology. Some background in the technological aspect (audio processing, programming, artificial intelligence, etc.) is recommended but not required.

   At the end of the workshop, students:
   - will have a broad knowledge of the MIR field.

- will acquire skills to understand the fundamentals of audio signal processing applied to music data.
- will acquire skills to understand the fundamentals of artificial intelligence applied to music data.
- will understand the different challenges associated with this field in a simple way.
- will have references and tools to understand how MIR systems work.
- will know the possibilities that the MIR field offers at a scientific, technical and business level.

4. **EdTech for Second Language Learning**
   Workshop teachers: Dr Copelia Mateo, Mr Javier Fernández, Dr Julián López and Dr María Felicidad Tabuenca, University of Alicante

   In this workshop, students will learn how to design Computer Assisted Language Learning (CALL) activities considering the different pedagogical and methodological theories of second language learning. This workshop also explores some current technological tools that have been demonstrated to be efficient to teach a foreign language. The materials of the workshop will be available for students on the Moodle platform.

   Main objectives of the workshop:

   (a) Introduce the most relevant language teaching technological approaches.
   (b) Give students a repertoire of some current and well-known technological tools that have been demonstrated to be efficient to teach a foreign language.
   (c) Provide students with strategies to use the technological tools proposed in an effective way so they can provide the support needed to guarantee more effective learning.
   (d) Use technologies to create meaningful materials and activities for second language learning.

Duration of the workshops and ECTS
30 hours (14 hours of face-to-face lessons and 16 hours of individual work online).
Maximum number of students per workshop: 20
All students will be issued with certificates and transcripts of records for 3 ECTS recognized by the entire T4EU alliance. In order to obtain 3 ECTS credits for participation, students will be provided with reading material and should complete a task after the workshop (see detailed information for each workshop attached).

Important information
Travel and accommodation expenses will be funded by T4EU initiative, please contact the T4EU office at your home university.

Tentative programme of the T4EU Week

Monday, May 8	➢ Arrival ➢ Welcoming event ➢ Cultural activity
Tuesday, May 9	➢ Workshops ➢ Cultural activity
Wednesday, May 10	➢ Workshops ➢ Cultural activity
Thursday, May 11	➢ Departure