VRP4Youth – Innovative Integration Between Virtual Reality and Rapid Prototyping for Youth

The VRP4Youth initiative aims to provide Virtual Reality (VR) and Rapid Prototyping (RP) skills to unemployed youth who cannot acquire competencies related to new generation technologies in formal education processes. This will strengthen their employability.

Background

Youth unemployment is one of the most important problems in Europe. According to the end of 2021 data, the average unemployment among young people aged 15-24 in Europe is 14.9%. One of the important reasons for the high youth unemployment rate is the difficulty that young people in **accessing new technologies**. The problems experienced by educational institutions in adapting to technologies that came to the fore with Industry 4.0 and 5.0 and quickly became standard production processes are an important reason for this difficulty. Removing the barriers to young people's access to new technologies and new professions such as VR and RP will result in the training of the qualified workforce needed by the market, and will also contribute to youth employment.

VR is computer modelling of real life experienced through vision, sound and touch in product development. **RP** is the production of a physical model from a computer model without the need for any apparatus or fixtures or numerically controlled programming. Quickly produces a scaled model of a physical part or assembly using three-dimensional computer-aided design (CAD) data. Incorporating VR and RP into design and manufacturing processes is one of the most critical issues of new age technologies. Integrating VR into the RP process is an important innovation in terms of digital production processes. Within the scope of the project, the ability of young people to use VR and RP in an integrated way will increase the use of these two technologies in the design and production processes. The project will contribute to the **integration of VR and RP** into production processes, promoting a greener, sustainable manufacturing process in partner countries.

Aim and objectives

The main objective of the project is to provide **VR** and **RP skills** to unemployed youth who cannot acquire competencies related to new generation technologies in formal education processes, and to gain the ability to use these two technologies in an integrated way in design and production processes. In this respect, the project directly addresses a main priority: “increasing quality, innovation and recognition of youth work".

The objectives to be achieved by the project are defined as follows:

1. To understand the **needs** of unemployed and related industries in context of VR and RP
2. To promote/teach i**nnovative applications** to youth on an international scale to increase their employability and help advance their careers,

3. To promote the **integration** of outputs of **Industry 4.0** into the skills and competencies of young people at the international scale,
4. To develop adequate **educational materials** along with **trainings** for youth to allow them to develop innovative products

Key actions

The proposed research objectives will be pursued through the following phases:

- A **research report** on the needs of youth and skill mismatches regarding VR and RP affecting their employment in related industries,
- VR and RP **online training modules** with supporting documents
- **Hands-on training** that will facilitate active participation of youth into learning processes of VR and RP.

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Duration

September, 2022 – August 2024

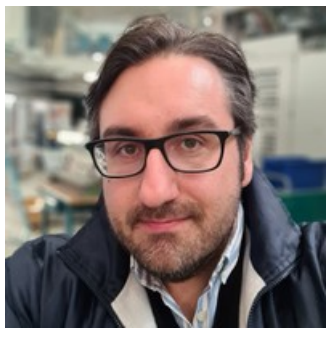
Project partners

- KTH Royal Institute of Technology
- Gazi Universitesi
- Association of Academicians Union (Turkie)
- Instituto Politecnico do Porto
- GODESK S.R.L.

Links

Project link:

Contact



Antonio Maffei
Associate professor
maffei@kth.se
+4687907871
Profile

HÅLLBARA PRODUKTIONSSYSTEM

KTH Taggar: Production Engineering ongoing project

Page responsible: Alexandra Von Kern
Belongs to: Department of Production Engineering

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