BIG ART NEWSLETTER

JANUARY 2025 TO JUNE 2025

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WELCOME

We are thrilled to enter an exciting new phase of our project – **the transition from planning and preparation to real-world application**. After introducing the project and sharing highlights from the initial lecturer training in Greece in our first newsletter, we now move forward with on-the-ground implementation in classrooms across Israel and Albania.

This edition features a glimpse into how lecturers are beginning to use the augmented reality tools in their teaching, alongside students' first impressions and learning experiences. These early steps reflect the tangible progress being made – and the enthusiasm is growing as innovation becomes part of everyday learning.

Despite the security situation in Israel and the changing teaching format, we continue to promote the project and thank all partners for their ability to implement new initiative.

Warm regards,
Sharon

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THE DEPARTMENT OF PRACTICAL ELECTRICAL ENGINEERING AT ORT BRAUDE COLLEGE, KARMIEL

The Departmant of Practical electrical Engeeniring at Ort Braude college continues to lead the way in technological education, aligning constantly with the professional requirements of the high-voltage sector, in accordance with the Electricity Law, occupational safety regulations, and the standards established in Israel's electrical and industrial energy sectors.

Since the beginning of the current academic year, the department has been advancing teaching methodologies by incorporating innovative imaging technologies. Among these efforts, we have conducted a 3D spatial scan of the Electrical Systems Laboratory using Matterport – a cutting-edge platform that creates immersive virtual models of real environments.

This laboratory, in which students engage in hands-on training, simulates real-world industrial electrical environments and includes low-voltage three-phase systems, residential electrical installations, control and monitoring panels, and photovoltaic (PV) systems that simulate solar energy applications. All components are aligned with updated training tracks and current trends in the renewable energy sector.

The use of Matterport allows students to experience interactive and holistic learning, enabling them to become familiar with the laboratory space even outside class hours. It also provides a safe and thorough preparation for working with energized systems under the supervision of a certified instructor – in accordance with the strict safety requirements defined in the licensing and qualification frameworks for electrical technicians and practical engineers.

Furthermore, this technology has been successfully implemented as part of students' final projects. Learners conduct 3D scans of existing electrical installations, either for the purpose of documenting practical work or as part of professional design projects aimed at upgrading lighting and electrical systems in public or commercial facilities.

This initiative is designed to enhance students' professional competencies and prepare them for effective integration into the electrical, energy, and renewable technology sectors, while providing them with a solid theoretical and practical foundation to support their continued academic and career development in the ever-evolving field of electrical engineering.

Below is the link to the 3D virtual tour of Lab D104 – Electrical Systems Laboratory:
https://my.matterport.com/work?m=c3wg5PabtHU&back=1

Saeed Hammam
Head of the Department of Practical Electrical Engineering,
ORT Braude College of Practical Engineering, Karmiel Israel

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SOFTWARE DEPARTMENT STUDENTS FROM ORT BRAUDE COLLEGE VISITS TDK

As part of the "Erasmus +" project, students from the Software Department of ORT College in Brauda Karmiel visited the TDK-Lambda Israel factory, which develops, manufactures and markets power supplies for a wide range of applications; laboratory power supplies, programmable power supplies, medical power supplies and supplies manufactured according to customer requirements.

The purpose of the visit was to learn about the factory, get to know the departments and the way they work, from the software development phase, chip construction, power supply production, storage and marketing, while monitoring each stage.

The students met the company's CEO, Mr. Doron Peled, who received them with great respect, explained to them about the factory, goals and the way they work, and gave them a guided tour of all the departments.

The students were very interested, asked professional questions, wrote down the details, took professional photos using the new software, and began editing their project. Later, other students will be able to visit the factory virtually thanks to the photos.

Samih Zin-Aladin
Lecturer
Department of Software Practical Engineering
Ort Braude College

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CREATING MY FIRST PROJECT WITH STUDENTS- BIOTECHNOLOGY DEPARTMENT ORT BRAUDE COLLEGE

Our space: "Food Technology Laboratory Link:
https://my.matterport.com/models/XhdSLPzNSLu

The goal of this project is to capture the space of the main lab exercise done during studies of the course "Food Technology and FoodTec" taken by Students of Biotechnology Engineering on their 2nd year.

This project is done with two of my students, as part of their final project requirements. The students are 2nd year students in Biotechnology dept. They are: Marwan Mansour (Male) and Dianna Daxa (Female).

So far, we have taken the pictures of the lab, early in the morning, before the students came to start the lab work. Marwan and Dianna have also started to edit the space, adding tags with text, pictures and videos taken by them during the lab exercise. This work is still in process and will be completed by September approximately. The final product will be used by next year's students, as a preparation before doing this lab.

They will be able to take a tour in the lab's space, see all the different equipment to be used, and get explanations on how to use them and what they are expected to do.

We believe that it will be a wonderful tool and will greatly help future students to be better ready for the lab and make the best of learning from it.

Yoav Merom
Lecturer in Biotechnology Dept.
ORT Braude College of Practical Engineering, Karmiel Israel.

THE DEPARTMENT OF INDUSTRIAL ENGEENIRING USED MATTERPORT FOR THEIR FINAL PROJECTS

Final year students in the Department of Industrial Management and Engineering participated in a course on Project Feasibility.

Analysis. As part of the course, students were required to identify problems at the site where they were conducting their final project and to propose viable solutions to those problems. The course provided tools for evaluating the economic feasibility of the proposed improvements.

A total of five projects were carried out. A pair of students conducted each project at five different locations: a café, a factory for manufacturing ladders, a cardboard production factory, a water systems manufacturing facility, and an electronics factory.

The student cohort was diverse, consisting of 4 women and 7 men, including 5 Jewish students, 2 Christians, 1 Muslim, and 2 Druze. These students studied together and collaborated on their final projects.

The students projects will be evaluated by external examiners who are unfamiliar with both the students and the project sites. In the past, this often posed challenges in conveying the nature of the problems, which the students themselves knew intimately. To address this issue, we chose to utilize the MATTERPORT software. This tool enabled students to present the work environment clearly and to highlight problem areas using Labels and Guided Tours.

We believe that the use of this software will assist students in effectively explaining the work processes they undertook and will help clarify to the examiners the depth and seriousness of their engagement with the final project.

Anat Nissel-Miller
Lecterure, Industrial and management practical engeeniring departmant
Ort Braude College

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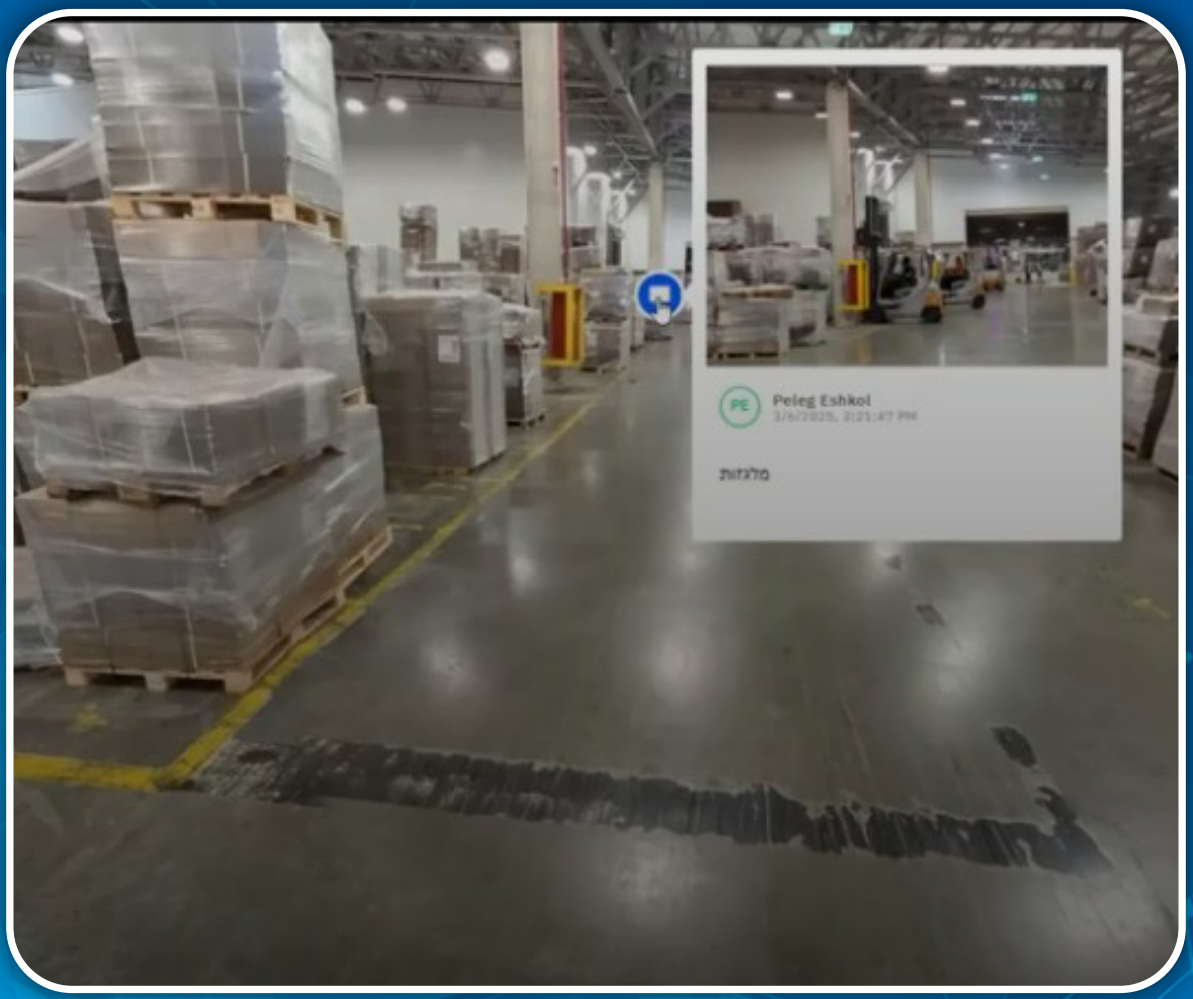

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ORT BRAUDE COLLEGE OF ENGINEERING PURCHASES ADVANCED PHOTOGRAPHY EQUIPMENT FROM MATTERPORT

In the photo, Dr. Shadi Asskale trains the lecturers before going out for photography

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STUDENT CORNER: INTERVIEW WITH ROY SHERMAN, A STUDENT IN THE DEPARTMENT OF ELECTRICAL ENGINEERING

Roy, a 30-year-old student in the Electrical Engineering Department, was first exposed to MATTERPORT's photography software during a demonstration by his department head, Said. Roy tried to find a factory that would allow him to experiment with photography, but encountered difficulty. His department head suggested that he map out the college's branding lab, and he accepted the challenge.

"It was once believed that you either have spatial vision or you don't. The Matterport 3-D software shows that it is possible to improve spatial vision and also understand that looking from multiple angles allows for a complete picture. The more points we scan, the better the picture we get." Symbolically, photography is also likened to questioning many people to obtain perspectives and using various technological tools to reach a more successful problem-solving approach, adds Roy.

Roy recommends that the college allocate a fixed amount of time in the curriculum to study software like this one as early as the first year so that they can use it later in their studies. He also suggests using the software for the purpose of planning a theoretical project and not just for the practical learning of an existing project.

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Pictured:
On the right is Roy Sherman (student) On the left is Said Hamam, head of the electrical department

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BIG ART AT KOLIN GJOKA

As part of the BIG ART project ,our school hasactively introduced the initiative to key stakeholders, including students, teachers, and local businesses. We organized several presentations and discussions to showcase the goals and tools of the project. The response has been extremely positive – all groups expressed great enthusiasm about the opportunities BIG ART offers. Students were particularly excited about the creative tools and the potential to present their work. Our teachers see strong potential for integrating project elements into both theory and practice lessons. Additionally, we introduced BIG ART to international students and teachers from our partner schools abroad, during exchange visits. Their interest and feedback have been highly encouraging. We believe this project will strengthen not only creative skills but also cross-cultural cooperation. We're excited about the next steps and look forward to sharing more outcomes soon

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BIG ART FUTURE PLANS

The project team is currently planning the student competition. As part of the competition, the students will present in English to a panel of judges. The panel of judges will set criteria that will examine the technical use of the software, the level of presentation, the software's contribution to understanding the topic, and the total future use of the products. The students who win the competition from Albania and Israel will fly to Greece next school year.

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BOOT CAMP FOR TEACHERS

- WP3 D3.2 Deliverable No D6 - Train the Trainer in Greece: Defining the Market Scope for Trainers and Trainees – Introduction 31/5/2025 Trainers must act as researchers of the global market to identify emerging areas for Augmented Reality (AR) applications. They need to understand evolving needs, conduct feasibility studies, and evaluate potential applications. Their role includes defining application requirements aligned with actual market demands to ensure the relevance and effectiveness of AR training. Trainees, on the other hand, are expected to acquire the necessary knowledge and skills through the training programs provided by the trainers. The overall concept revolves around establishing an AR Lab that serves both trainers and trainees.
- Designing the Lab In collaboration with AR mentors, trainers are responsible for defining the lab's characteristics and overall effectiveness. The lab should include comprehensive knowledge, appropriate tools, and insights drawn from past and present AR labs across various sectors. Spatial models are essential for analyzing requirements and shaping the architectural design of solutions.
- Working with Matterport SDK to exploit Digital Twins
- Training Trainess in Athens

Stratos Labrinos Vlattas
Technical Expert

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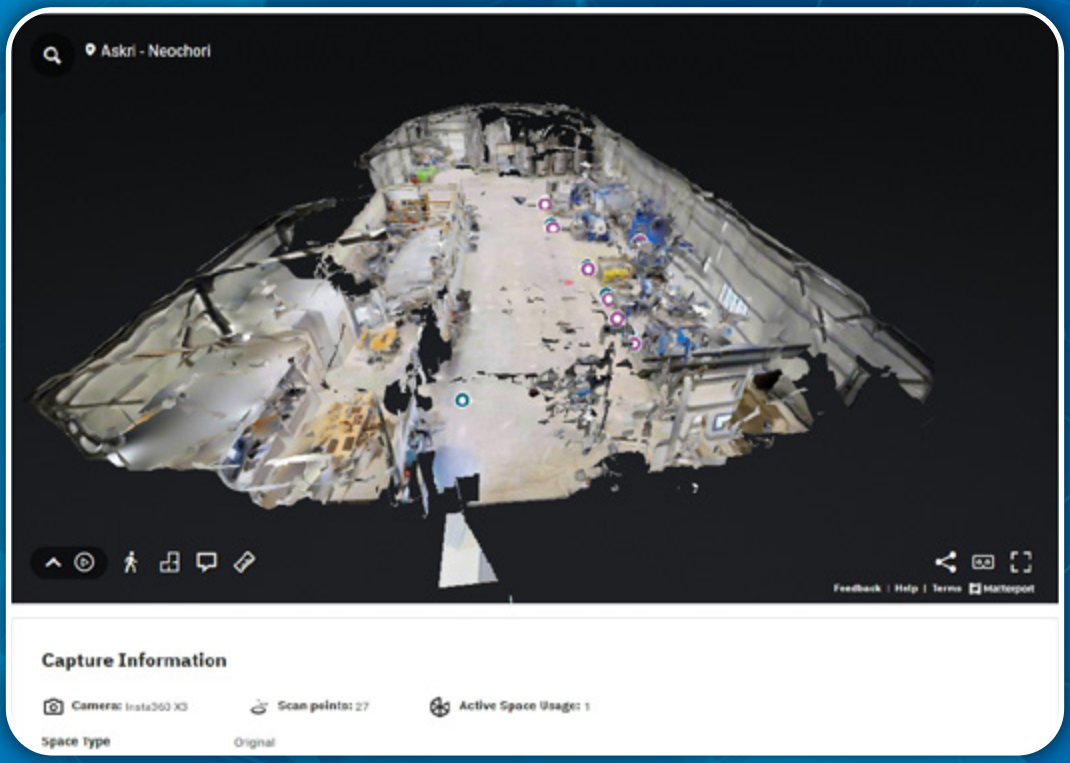

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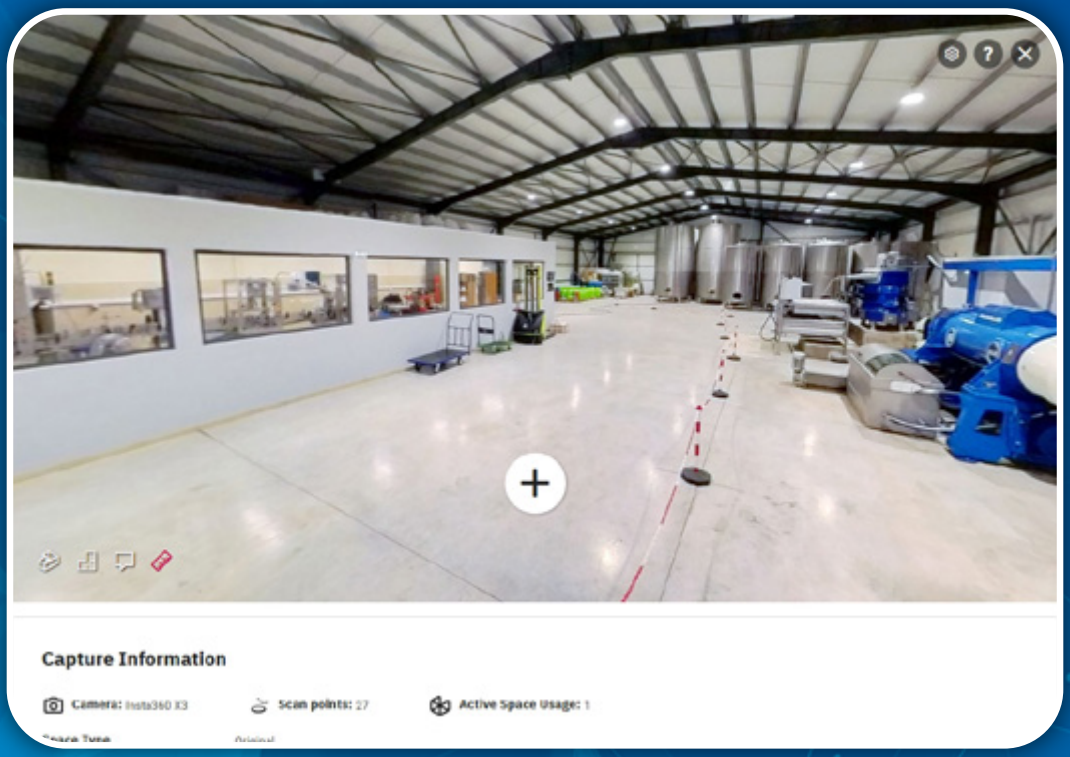

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