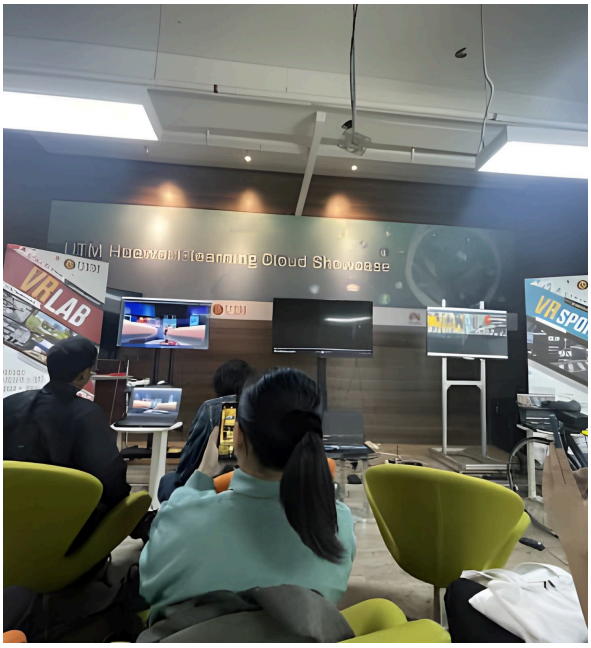
Driving Innovation: UTM's Role in Shaping Future Technologies and Education

Industrial Visit 2 – Universiti Teknologi Malaysia

Date: TUESDAY, 31 DECEMBER 2024

SUMMARY OF THE VISIT

Prof. Dr. Mohd. Yazid bin Idris recently delivered an enlightening session that bridged innovative education and real-world challenges. He began by highlighting the university's commitment to equipping students with essential digital skills through Unity training.



Two certification tracks are offered: one for individuals new to Unity and another for those who successfully complete an in-depth course. These certifications are designed to enhance students' technical proficiency and competitiveness in the job market.

The discussion then transitioned into a broader exploration of technological solutions, focusing on the challenges faced in underwater operations and the innovative role of the Media and Game Innovation Centre of Excellence (MaGICX) at Universiti Teknologi Malaysia (UTM).

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ISSUES IN OUR REAL WORLD

The session provided valuable insights into pressing challenges and real-world applications, including enhancing safety in oil and gas pipeline management through underwater operations. Using Virtual Reality (VR) to simulate hazards and prevent accidents in automotive safety has been instrumental in improving road safety and driver training. In addition, the application of advanced visualization techniques has proven to enhance operational efficiency in aerospace simulations, paving the way for safer and more reliable air travel.

TECHNOLOGIES IN FOCUS

Participants explored advanced technologies at MaGICX, examining tools that integrate gaming and engineering to solve real-world challenges. Highlights included Virtual Reality (VR) demonstrations with motion controllers and biking simulators analyzing speed and distance. Unity's use for 360-degree simulations and gamification stood out for bridging entertainment with practical applications. MaGICX's engineering solutions spanned industries, showcasing simulations for underwater pipelines, aerospace challenges, and automotive safety systems. These technologies demonstrated MaGICX's significant role in reshaping education and advancing industrial innovation.

EXAMPLES:

Underwater Operations:
Simulations addressing safety and efficiency in oil and gas pipelines.

Image Source: https://images.stockcake.com/public/f/b/6/fb6007d7-e957-4c4f-8c6d-ee272253baec_large/underwater-welding-operation-stockcake.jpg

Automotive Safety:
VR applications for hazard and accident simulations.

Image Source: https://www.safetyandhealthmagazine.com/ext/resources/images/2020/03-mar/VR.jpg?t=1581959342&width=768 | https://immersafety.com/wp-content/uploads/2023/09/1-5.jpg

Aerospace Simulations:
Advanced visualization and modeling techniques.

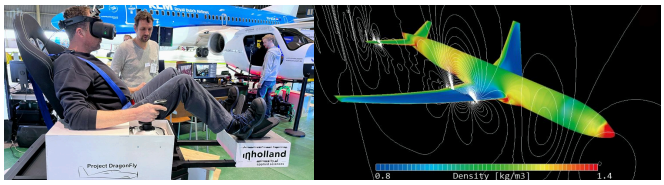

Image Source: https://d3snfrf5umcrvh.cloudfront.net/wp-content/uploads/2022/03/blog-sized-image_scflow_06.jpg | https://projectdragonfly.nl/wp-content/uploads/2023/06/VR_sim_dragonfly_pas2023_e.jpg

REFLECTION

The visit emphasized the adaptability of game engines like Unity across diverse fields, the role of Virtual Reality in enhancing real-world understanding and safety measures, and the value of industry certifications in building future-ready professionals. Participants gained a comprehensive view of UTM's role in leveraging technology to integrate education and innovation, aligning with the Fourth Industrial Revolution goals.

LOOKING AHEAD

This visit underscored the transformative power of technology in addressing global challenges. UTM's initiatives inspire future collaborations and innovations, showcasing how game engines can redefine industry practices. The knowledge gained inspires a future of innovation and collaboration across industries, highlighting the importance of staying ahead in technology.

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