

SUGGESTED TOPIC FOR SCIENTIFIC WORK

CAD-to-Unity / Mixed Reality (MR)

Join our engineering team in advancing electric race car development through next-generation Mixed Reality in cooperation with an industry leading company.
Startpoint is to develop an automated, reusable workflow that exports engineering models from Siemens NX directly into Unity. By enriching CAD data with metadata and optimizing the conversion pipeline, you will eliminate the manual intermediate step via Blender.
The goal is to render our high-fidelity digital vehicle directly on the Meta Quest 3 with maximum visual quality and real-time interactive capability. The resulting MR asset will support development, assembly, service operations, technical training, and high-impact project presentations.
The topic is merely a suggestion and must be finalised with the institute.



AI generated image

Tasks:

- Metadata enrichment on CAD-Data
- Develop a direct NX-to-Unity workflow including Blender
- MR optimization for Meta Quest 3
- Validate results in MR and document standards

Requirements:

- Studies in MINT
- Experience in Siemens NX, Unity, or real-time 3D pipelines; basic scripting (C#, Python, APIs) is a plus
- Understanding of 3D geometry and assemblies
- Strong interest in MR automation, paired with a structured and independent approach