Chair for Human-Centered Technologies for Learning
TUM School of Social Sciences and Technology
Technical University of Munich

“I Learn therefore I am.” - Designing Immersive VR and LLM-based Learning Environments for Intangible Cultural Heritage

Background:

Protecting cultural variety and human creativity, preserving and transmitting intangible cultural heritage (ICH) practices and knowledge is crucial. Innovative tools like large language models (LLMs) and virtual reality (VR) have been employed more and more to develop immersive learning environments that help spread knowledge. The main emphasis of the thesis is to construct a prototype VR and LLM-based learning environment that is used to educate students on a particular ICH practice or knowledge topic. The research for the thesis will look into how various design components, like interaction, feedback and visualization, can be used to create immersive and engaging learning experiences that facilitate the transmission of ICH practices and knowledge.

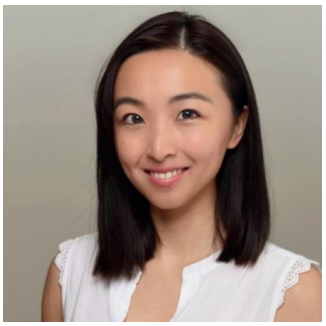
What you’ll gain:

- Hands-on experience in designing VR applications
- Demonstrate skills proficiency in game engineering
- Evaluate prototype from real life feedback
- Publish a paper to conferences

Prerequisites:

- Experience in game engines (e.g. Unity3D or Unreal)
- Programming skills in C# and Python

Contact Person



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Focus Areas

- Virtual Reality
- Large Language Models
- Design Principles
- Game Engineering