

Immersification of Blended Learning

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Virtual Reality (VR)



Augmented Reality (AR)



Mixed Reality (MR)



Immersive Media

Immersive Media

Immersive media refers to technologies like Virtual Reality and Augmented Reality. From sectors like engineering, media, healthcare, education and retail, immersive media is expected to play a key role in the development in the digital economy. It is projected to reach US\$209.2 billion by 2022 and is one of the four technology frontiers that IMDA is focusing on.

XR is the new AR/VR (and MR)

immersification

gamification

/ˌgeɪmɪfɪˈkeɪʃ(ə)n/

noun

noun: **gamification**

the application of typical elements of game playing (e.g. point scoring, competition with others, rules of play) to other areas of activity, typically as an online marketing technique to encourage engagement with a product or service.

"gamification is exciting because it promises to make the hard stuff in life fun"

immersification

/ɪ'mɜːsɪfɪ'keɪʃ(ə)n/

noun

noun: **immersification**

the application of XR elements (e.g. 360 videos, virtual/augmented/mixed reality) to blended learning activities, typically as a way to immerse students in interactive computer-mediated learning to increase engagement and hence learning outcomes

“immersification of my modules helped pick me up from dark moments because my students said I was the coolest lecturer”

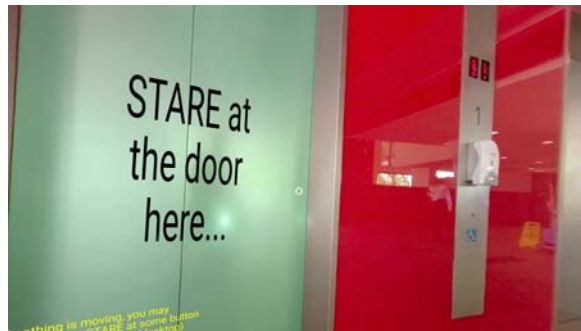
The Immersification Continuum





Shallow

Deep



Layer XR onto
e-lectures to enhance
e-learning experiences

Shallow

Deep



Create e-lectures to
augment the
learning experience

Shallow

Deep



Integrate
Applied XR Projects
to redefine
student learning



Project First Mile Last Mile (FMLM):

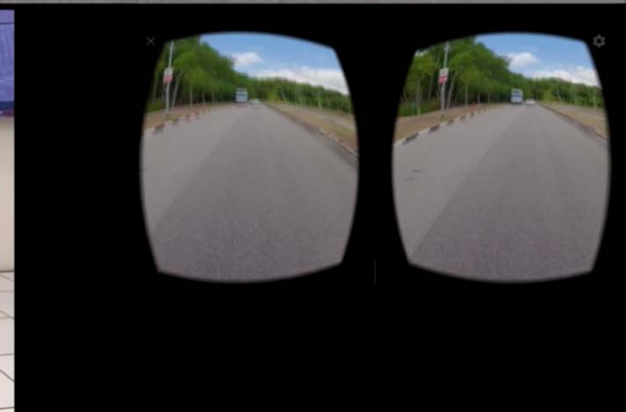
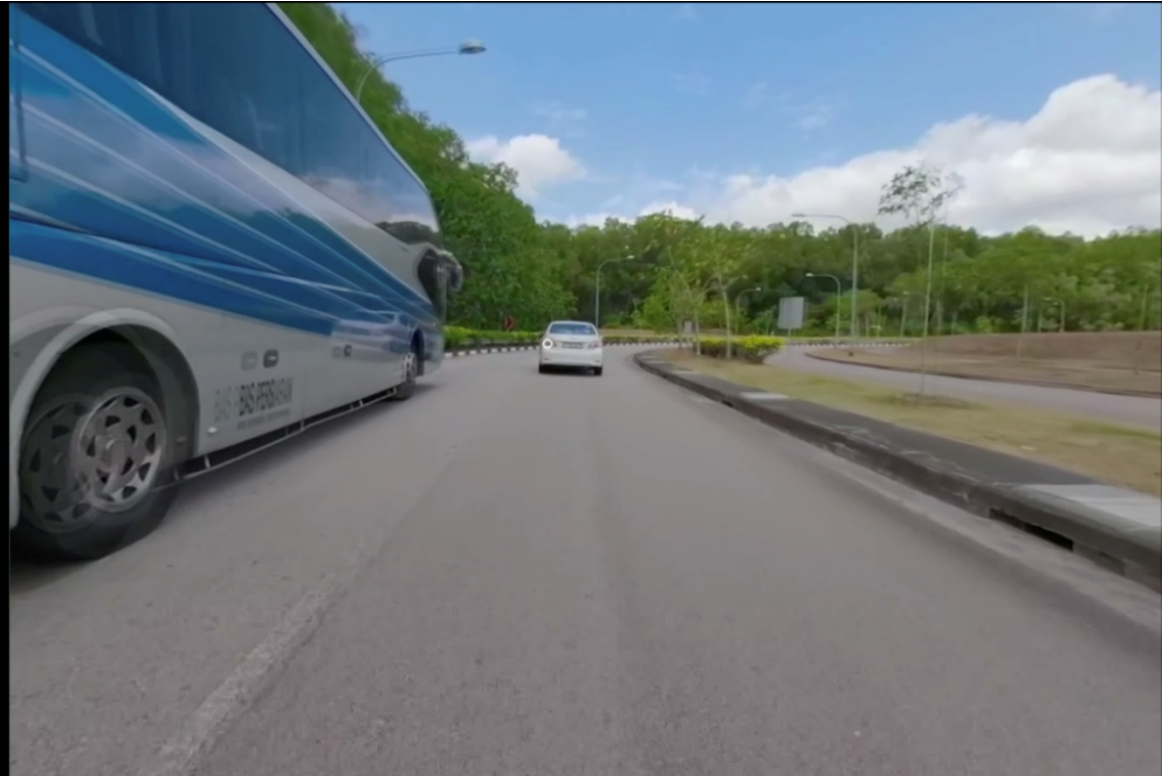
Tan Chek Tien, Indriyati Atmosukarto, Jeannie Lee, Kent Lam, Jawn Lim, Wang Zhengkui, Donny Soh, Khoo Beng Keat (AVPL), Chong Chee Leong (AVPL)

LTA SSB

A VR safety training platform for cycling

SIT

Tan Chek Tien, Jeannie Lee, Tham Chen Munn (KLKK Pte Ltd), Steven Lim (SCTF)



VR Mobility Training

SIT

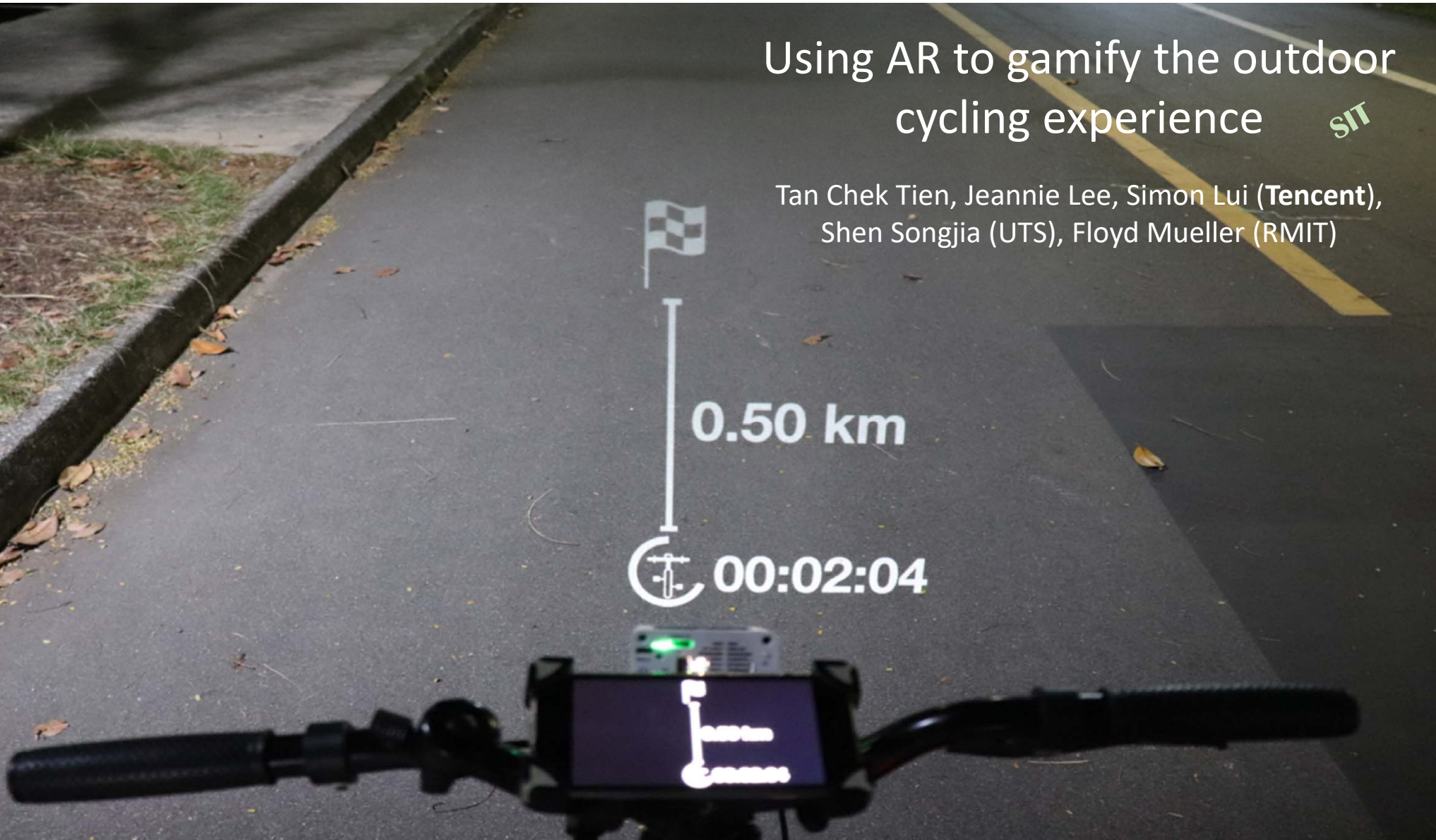
Benjamin Soon Tze Chin, Alfred Tan, Loo Poh Kok, Tan Chek Tien, Dr Cai Cong Cong (NTFGH)



Using AR to gamify the outdoor cycling experience

SIT

Tan Chek Tien, Jeannie Lee, Simon Lui (Tencent),
Shen Songjia (UTS), Floyd Mueller (RMIT)



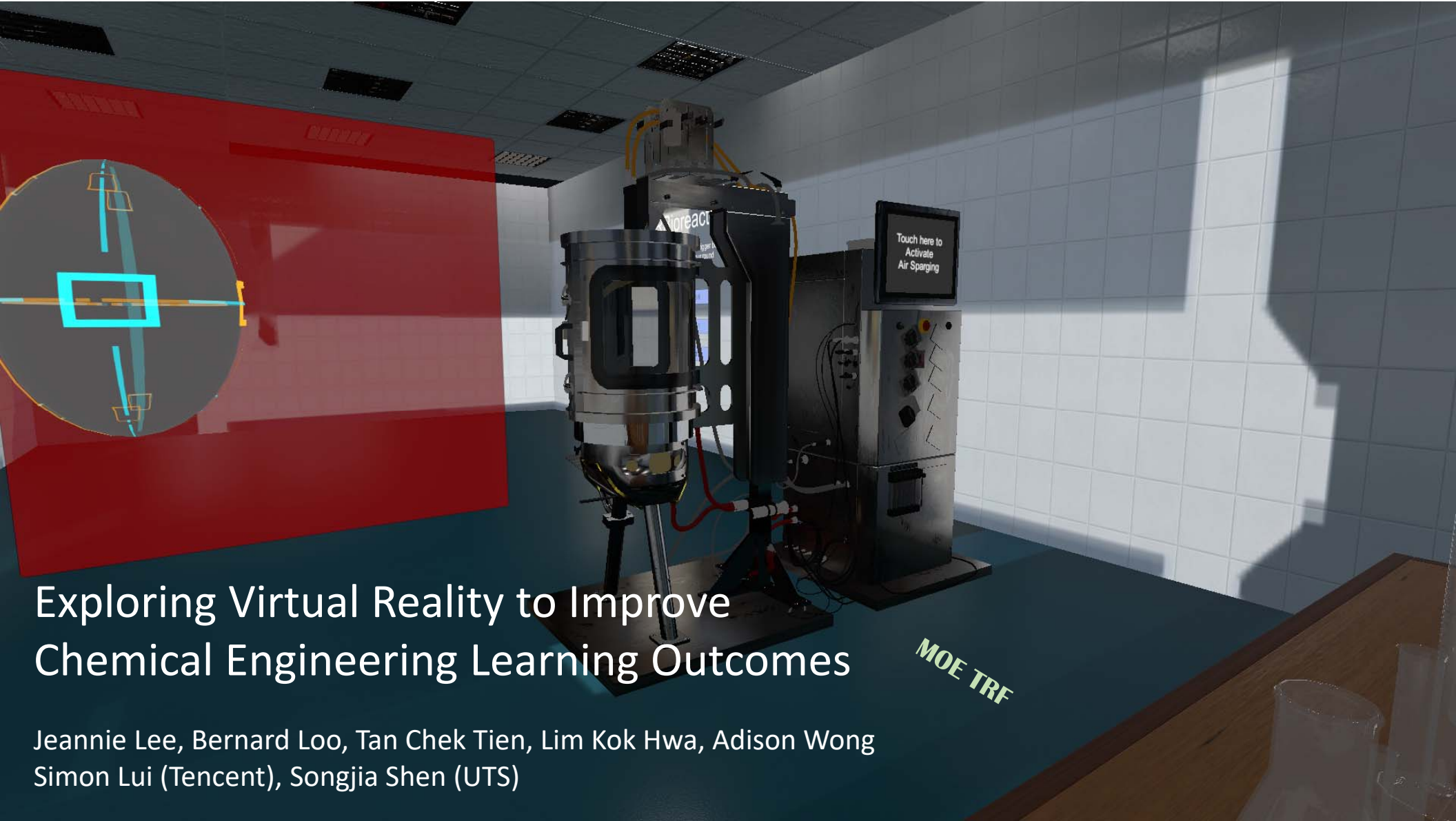
Shallow

Deep



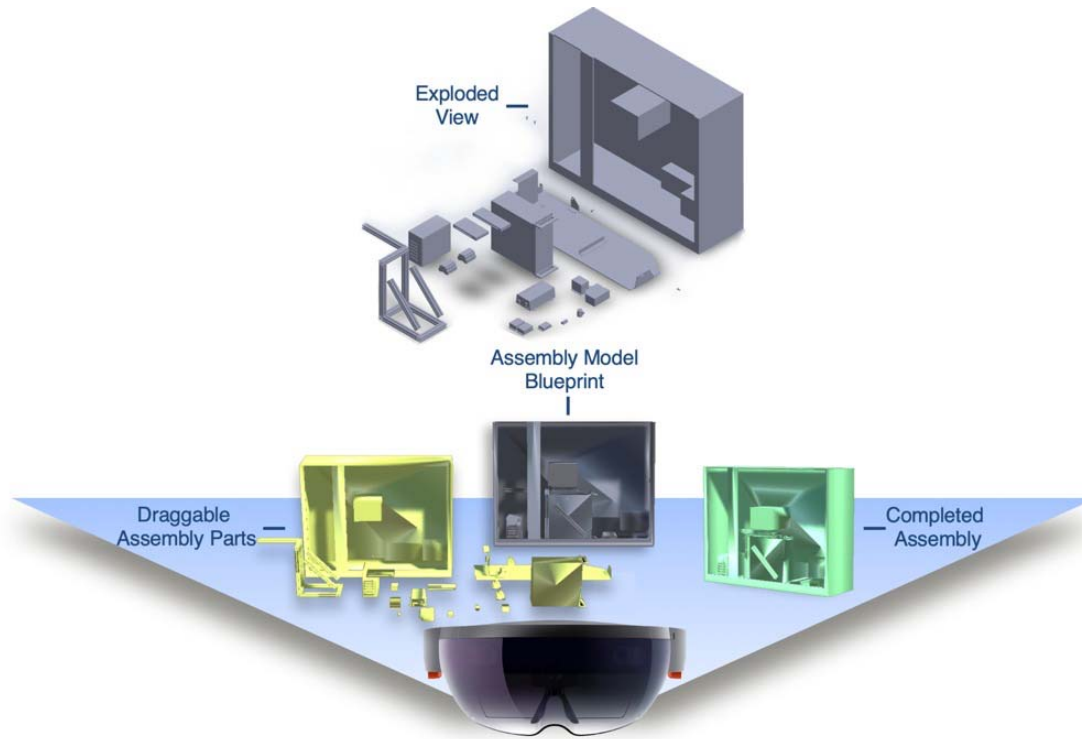
Develop Applied XR Projects
to transform learning activities





Exploring Virtual Reality to Improve Chemical Engineering Learning Outcomes

Jeannie Lee, Bernard Loo, Tan Chek Tien, Lim Kok Hwa, Adison Wong
Simon Lui (Tencent), Songjia Shen (UTS)



Designing with Holograms: Mixed Reality for Design and FEA Analysis

Kyrin Liong, Vivek Balachandran, Jeannie Lee, Alfred Tan
Aloysius Tan (**HOPE Technik**), Cheng Heng Kee (**HelloHolo**)

SIT





SIT

Immersive Experience in Wind Tunnel Modeling using VR

Victor Wang, Eicher Low, Rendell Tan, Jeannie Lee, Kyrin Liong, Khoo Beng Keat (AVPL), Chong Chee Leong (AVPL)

Where to go from here...

