AR/VR Environmental Realism for SE
Fall 2022 | SYSE 581A1
5:15 - 8:00 p.m. Tuesday
Dr. Marie Vans

Course prerequisites: STAT 301 or equivalent or MECH 231 (Engineering Experimentation)

Dr. Marie Vans has academic and industry experience developing virtual reality simulations for education, product introduction, and analytics. Dr. Vans was at HP Labs for more than 20 years and is the author of 55 publications and 35 U.S. granted patents.

Systems-based on-ramp to AR & VR

This course explores, explains, and expands the means for engineers, and particularly systems engineers, to create environmental realism in AR/VR applications. This course is the first in a two-part series the second course (SYSE580A5: Teaching and Training Using Immersive Tech) will have students implementing the final project from this course.

Students completing this course will be able to:
- Develop safety protocols, test plans, inclusive design, learning measurements and assessments
- Interpret learning models by developing curricula and designing experiences based on learning models
- Generate a complete requirements document including functional and quality of service requirements for handoff to downstream engineering

Topics covered in this course:
- General discussion of AR, MR, and VR and of industries that will are being transformed by the application of them
- Discussion of use cases and immersive-suitable domains for AR/VR/MR
- Discussion of how people learn, including learning models and developments of curricula