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Towards Gamified Learning in Immersive Teaching of Fluid Mechanics[1] NITESH BHATIA, Imperial College London, KAILYN BRYK, EVELYN SALAZAR, MIT, CHARLES RIGBY, OMAR MATAR, Imperial College London — FluidsVR is designed as a Virtual Reality (VR) platform for the exploration of transient and three-dimensional (3D) phenomena to promote deeper understanding of fluid mechanics. The platform serves as a learning medium by providing accurate and interactive models to the students based on the 3D data assets generated in-house by computational fluid mechanics researchers in the Matar Fluids Group. Students can visualize and interact with these assets using an intuitive graphical-user-interface. For improving the students' affective domain, learning outcomes, and engagement levels, we are exploring the effectiveness of gamification in the context of teaching and learning. We have arranged the data assets in the increasing order of learning complexity and incorporated game mechanisms such as interactive questions, progress levels, scores and leader-boards to motivate students to further engagement and higher achievement. In this talk, we will cover this new gamification system for FluidsVR that was developed with the help of a group of undergraduate chemical engineering research students from Imperial and MIT.

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