



Figure 1: This image shows a participant training interactive machine learning system by performing a movement during a workshop.

There are many forms of complex movement interaction that are not well supported by current technologies, such as embodied movements that are more intricate and performative. As movement interaction in immersive media gains popularity, we aim to address the demand for easy-to-use tools and ideation approaches that enables the design of body based interaction. This project works with immersive media creators and movement practitioners in the context of in-the-wild research, in order to understand how interactive machine learning can be used to create better movement interaction ideologies in creative applications, performance and games.

Movement interaction design for immersive media using interactive machine learning

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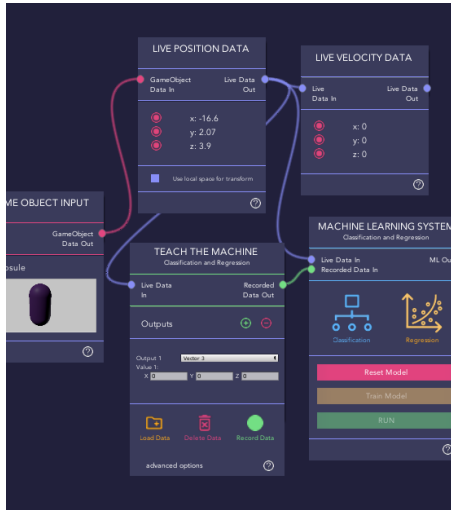


Figure 2: This image shows a section of the node based graph that allows users to configure and train interactive machine learning models using the InteractML tool.

During the workshop, participants will design movement interaction techniques and implement them using the tool InteractML [1], a plug-in for Unity 3D software. The tool is being developed to support users that do not have a background in computer programming to be able to train and configure the graph system to recognise complex movements. The workshops will provide feedback on how to improve the tool and refine working processes when designing movement interactivity for immersive media.

ABSTRACT

Interactive Machine Learning is a promising approach for designing movement interaction because it allows developers to capture complex movements by simply performing them. We introduce a new tool being developed to make embodied interaction design faster, adaptable and accessible to developers of varying experience and background. Using the tool, we conduct workshops with creative practitioners and developers to explore techniques that equip users with embodied ideation design strategies encouraging full body interaction for immersive media.

CCS CONCEPTS

• **Human-centered computing** → **Systems and tools for interaction design; Gestural input;**

KEYWORDS

movement interaction; machine learning; immersive media, interaction design, virtual reality

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WORKSHOPS USING INTERACTML

The workshop presented here will be online, interacting with participants virtually to design and implement their movement interaction designs over video conferencing. The workshop is based on two techniques. The first is embodied sketching: which explores new ways of designing movement interaction through “bodystorming” and “sketching” [3, 4]. If we are to carry on this embodied approach to design through to the implementation phase, we need to continue to use our body. Thus, our second technique, Interactive Machine Learning [2] uses an iterative design process allowing for rapid prototyping and refinement by performing body movements using the InteractML tool.

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