

**New Challenges & Next Steps**

*We are developing partnerships with a number of high school student populations to commence research-based evaluation of the system with the target population in the coming year.*

*We are developing reference materials, tutorials, and activities that introduce the system to new users and challenge them to interpret and apply computational concepts through implementation in the Embodied Coding Environment*

*[What have you needed to reconsider? ​What have you been able to creatively overcome and how? What will you be tackling in the year ahead?]*

**Equity**

*Two REU students from underrepresented backgrounds are currently contributing to development of the UI and other tools (UCSD).EPSCoR participation (UNL) is supported through curricular integration of embodied coding within an undergraduate seminar course (UNL).*

Our immersive Embodied Coding Environment provides a compelling introduction to game engine basics and computational thinking through flow-based programming in an immersive visual programming environment.

**Lessons Learned & Insights Gained**

*We have implemented an annotation and coding environment that supports fluid interchange between planning and implementation of computational processes.*

*Our Embodied Coding Environment (ECE) empowers users to interact with the simulated physics of an immersive gaming environment while developing computational thinking through flow-based programming in XR.*

**An Embodied Coding Environment for Learners**

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NSF Award Number​: 2017042 Dates: 2020 - 2023

Project type:​ IUSE, Innovative Technology Experiences for Students and Teachers (ITEST), Cyberlearning & Future Learning Technology

Project URL: [embodiedcode.net](http://embodiedcode.net/)

Project Overview: We enable users to create three-dimensional, spatially instantiated computer programs. Our Embodied Code Environment is a flow-based programming language implemented in VR, supporting computational concept learning, leveraging the perceptual and sensorimotor affordances of a 3D spatial medium.

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