SPIRE-EIT 2023

Summer Program for Interdisciplinary Research and Education – Emerging Interface Technologies

Project: On a Journey to College: An Interactive Web-Based 3D Game Prototype for First-Generation College Students

Short Title: 3D Game for First Gen Students

Faculty Mentors: Kimberly Zarecor, Professor of Architecture & Evrim Baran, Associate Professor, School of Education

Graduate student mentors: Jorge Yass (jyass@iastate.edu), Hila Sabouni (hsabouni@iastate.edu), Ezequiel Aleman (ealeman@iastate.edu)

REU Interns : Andric Brena, Curtis Johnson, Kristi Skinner

Description: Students whose parents did not continue their education beyond high school often struggle with identifying pathways into higher education including applying to and financing a university education even when they are highly motivated and talented. The students working with this research team will be developing a prototype of a web-based 3D game that will help first-generation students to navigate the journey from high school to university or into an alternate career path that might include community college or apprenticeships. The prototype will be built using Web GL, a JavaScript API for interactive 2D and 3D graphics, that works in a web browser without plug-ins. The interface will be bilingual in English and Spanish with graduate mentors who are native Spanish speakers. The mentors are HCI students from Computer Engineering, Architecture, and Educational Technology.

Students will be responsible for: 1) learning the basics of Web GL programming and related tools for building a 3D game prototype, 2) conducting a needs assessment of potential users and assisting with the journey maps, and 3) testing aspects of the interface functionality.