

RCEU 2023 Project Proposal

Project Title

Virtual Production Shorts

Faculty Information

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I. Project Description

Virtual Production has quickly taken over as one of the most popular methods of shooting and integrating live action actors and elements in computer generated (CG) environments. There is much that goes into professional virtual production shoots, such as extensive hardware for the LED wall, shooting stage, etc. We do not have access to a full LED wall or studio, but will experiment with alternate methods of employing virtual production on a smaller scale, such as rear projection, green screen, and large 4k monitors for stop motion. In addition to virtual production tech, this project will also use facial and body motion capture and will lean heavily on Unreal Engine.

II. Student Duties, Contributions, and Outcomes

a. Specific Student Duties

The student chosen for this project should be interested in creating real-time environment art in Unreal Engine, both digital and physical cinematography, matching digital environments to physical shoots, and researching, experimenting with, and employing entertainment technology in creative projects. In addition, the student should be highly motivated, a good collaborator, and an excellent troubleshooter.

b. Tangible Contributions by the Student to the Project (10% of Review)

The project team (faculty and student) will conceptualize short, interesting ideas to effectively and creatively demonstrate indie virtual production capabilities. The chosen student will design and create the 2D and 3D assets and virtual environments needed to create several proof of concept virtual production experiments. The student will also take part in all virtual production shoots and match virtual environments with live action elements on the fly.

c. Specific Outcomes Provided by the Project to the Student (30% of Review)

The student will learn and develop artistic and technical skills, gain a better understanding of industry best practices, as well as produce portfolio work. The student will see improvement in understanding of software tools and techniques and the artistic application of them, as well as improvement of soft skills such as critical thinking, communication and collaboration. The student will also develop a firsthand understanding of the strengths and weaknesses of virtual production as a whole, as well as a few options for creating indie virtual production setups. Finally, the student will learn to effectively handle the stress and pressure of troubleshooting issues in real time.

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III. Student Selection Criteria

Students interested in this position need to have a solid understanding of the 3D CGI pipeline and are required to have completed ARS 220 Animation: Introduction and at least two 300 or 400 level animation courses (ARS 32X or ARS 41X or ARS 42X) before the RCEU project begins. Students with at least one 400 level animation production course (ARS 41X or 42X) are preferred.

IV. Project Mentorship

(30% of Review)

Faculty mentor will be actively working on the project and will collaborate with the selected student on all phases of the project. The student and faculty mentor will be the RCEU Team. The selected student will work in Wilson Hall and Morton Hall with the faculty mentor. Working hours will be somewhat flexible. Direct interaction will occur daily to assess progress, talk about issues or potential roadblocks, and to evaluate technical and artistic work completed. Thoughtful, detailed feedback will be provided, and is expected in return. Help will always be available, but a good deal of independent troubleshooting and problem solving is expected. Software and hardware tools and techniques and advanced troubleshooting needed for the project will be demonstrated by faculty mentor.