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NASA Armstrong Internship Program

Undergraduate Intern
Computer Science

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"Greater Heights" Virtual Reality

Greater Heights Virtual Reality (VR) production continues! The goal of Greater Heights VR is to create a fully fledged Virtual Reality Experience centered around Neil Armstrong's historical test flight of the x-15 aircraft on July 26, 1962. The user will be able to experience Armstrong's very own work space as well as what it's like to operate and fly the x-15 itself. The original prototype that was developed within The Unity Game Engine (Unity Technologies, San Francisco, California) has since been ported over to the Godot Game engine for the incorporation of a customized physics engine. This physics engine will allow for life like flight simulations of some of Armstrong's most historical aircraft including the x-15. Many different Virtual Reality software developer kits are being utilized to maximize both user intractability and compatibility across various consumer and enterprise grade headsets. These include OpenVR, Oculus VR (Oculus Studios, Menlo Park, California) and SteamVR (Valve Corporation, Bellevue, Washington).

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"Greater Heights" Virtual Reality (VR) is a fully fledged Virtual Reality Experience that is currently being developed for public use. The VR experience will consist of two parts, the first being a story-based experience that will put the user into the shoes of Neil Armstrong on July 26, 1962 during his test flight of the North American X-15 hypersonic rocket-powered aircraft. The user will get to experience firsthand accurate representations of Neil's desk as well as the test flight of the X-15 aircraft. The second part will consist of a Free Flight Simulator for some of some of the area's most famous and historical aircraft. Users will be able to choose their favorite aircraft and experience an accurate simulation of that aircraft from takeoff to landing. The Unity Game Engine (Unity Technologies, San Francisco, California) is currently being used for the development of a prototype however, the goal is to transfer the prototype to Godot in the future for the incorporation of a custom physics engine. Both OpenVR and VRTK are being leveraged to allow for user intractability within the experience for the highest degree of immersion. OpenVR is also being utilized to maximize compatibility with most if not all consumer-grade virtual reality headsets.