VCU-CodeRVA Coding Partnership

Project Team: Kibria Malik, Ken Mikawa, Bryce Strobel, Kel Raphael

*Computer Science*

Project Number CS 25-306

Faculty Advisor: John Leonard, Ph.D.

Sponsor: CodeRVA

Mentor: John Leonard, Ph.D.

This project reimagines a historical landmark, the Richmond Pump House, through an innovative digital recreation in the popular video game Fortnite. Developed by a VCU Capstone team in collaboration with CodeRVA students, the initiative addresses the challenge of engaging a younger audience in historical preservation. Leveraging Unreal Editor for Fortnite (UEFN), the project creates an interactive island that faithfully replicates the Pump House’s exterior, surrounding park, and historical context. By integrating engaging gameplay elements such as quests, mini-games, and parkour challenges, the island transforms a traditional restoration effort into a dynamic, educational experience.

The immersive design encourages players, particularly those aged 18 to 24, to explore the site, learn about its rich history, and appreciate the cultural significance of the landmark. The recreation serves as both a promotional tool for education and a demonstration of how modern digital media can be combined with heritage conservation. Through careful planning, iterative design, and collaboration between academic teams and community stakeholders, the project aims to revitalize local interest and secure additional support for the restoration of the Pump House. Furthermore, the initiative underscores the value of interdisciplinary teamwork in addressing complex cultural challenges and sets a benchmark for future virtual heritage projects that bridge the gap between entertainment and education.

Keywords:Educational, Modeling, Game Development, Design

