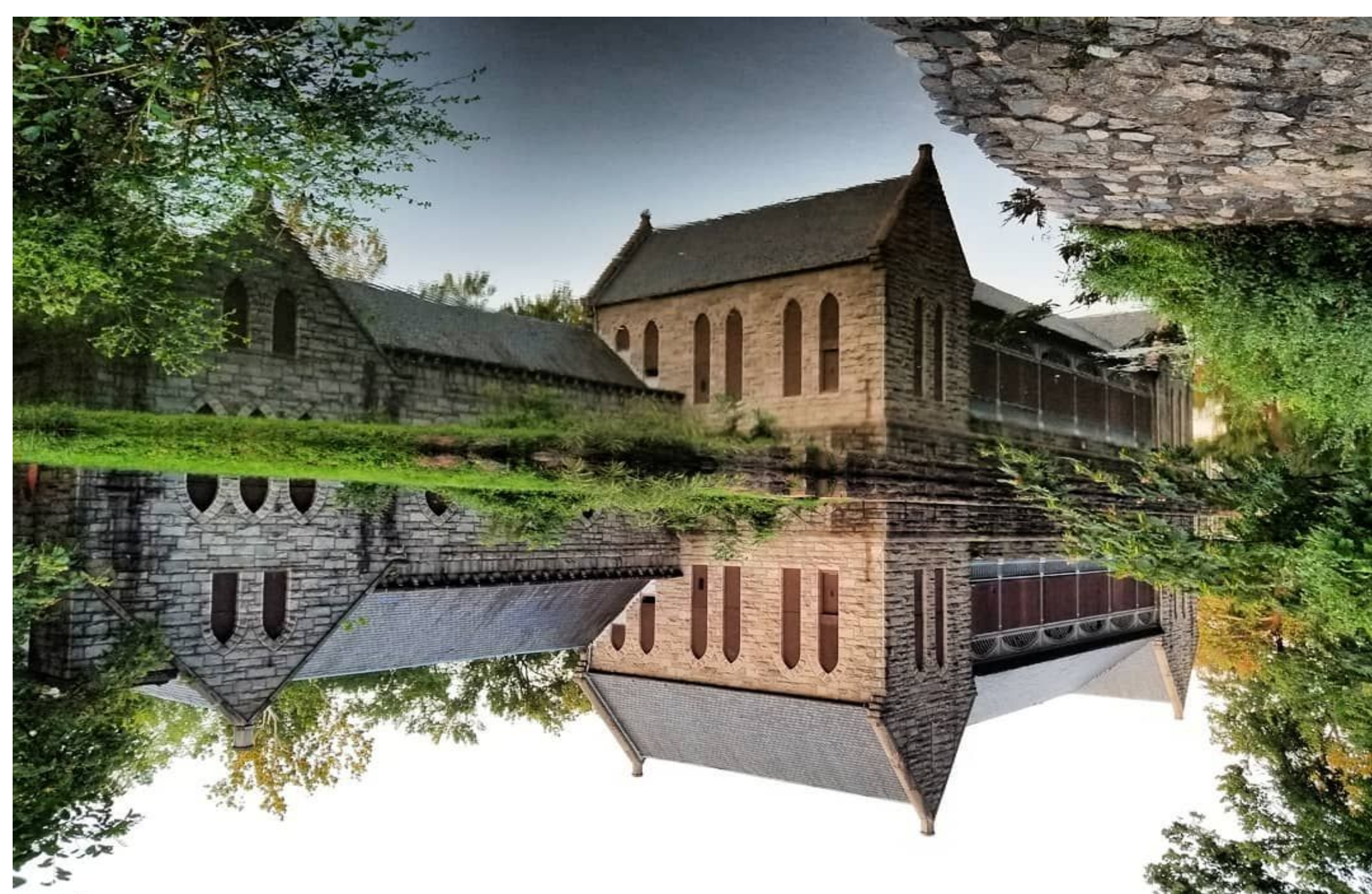


# VCU-CodeRVA Coding Partnership

**Team members:** Kel Raphael, Ken Mikawa, Kibria Malik, Bryce Strobel **Faculty adviser:** Adviser John Leonard, Ph.D. **Sponsor:** CodeRVA **Mentor:** John Leonard

## Problem focus



The Richmond Pump House, once a historic structure used to supply Richmond with drinking water, has been in a state of disrepair since its closure in 1924. For almost a century it lay in that state, until Joseph Costello founded the Friends of the Pump House, an organization dedicated to restoring the Pump House to its former glory.

However, restoring the Pump House doesn't come cheap. Even though they have received plenty of funding, the Friends of the Pump House will need plenty more if their goals of reopening the Pump House as a social gathering hub and museum are to be realized.

## CodeRVA



CodeRVA is a regional high school in Richmond, Virginia that specializes in teaching students computer science principles. They accept applications from rising high school freshmen and use a lottery-based system to accept their class for the year.

Juniors and seniors at CodeRVA enter a 6-week long internship program to work with real-world clients to build coding and work experience.

For this project, we worked with CodeRVA students to digitally recreate the Pump House in Fortnite. We developed the basic island layout and Pump House structure and acted as stakeholders to delegate weekly tasks for CodeRVA students to work on.

## UEFN



Unreal Editor for Fortnite (UEFN) is a variant of Unreal Editor specialized for the design of Fortnite islands. UEFN supports collaboration, so multiple people can work on an island from different devices.

This project uses UEFN to make a Fortnite island that transforms the Pump House into an interactive experience for players to explore.

## Tasks and Activities

So far, most of the work has went into gathering information, organizing a functional work flow, and designing a basic structure for the island. Friends of the Pump House have been a tremendous help, providing information and resources on Pump House design and history.

So far, our island includes the Pump House, bridge, and ground around the Pump House. We have also met with CodeRVA on a weekly basis to receive reports on previous tasks and assign new tasks. As of November, tasks that have been assigned include:

- Research the Pump House, and get familiar with UEFN
- Brainstorm possible interactive features to add to the island
- Create models for the bridge, ramp, and stairs that lead to the Pump House
- Develop a parkour course that users of the island can challenge themselves with

We intend to continue refining the building and surrounding landscape, as well as adding more fun and educational interactive features.

