

# Lighthouse VR Coding Task

As part of the interview for the VR Engineering position we ask all candidates to complete the following project. We use this to determine your engineering practices and proficiency with the technologies we use day to day. This is representative of the type of projects we create at Lighthouse, and you should complete it as if it were a production project. We're not expecting candidates to spend more than 3-4 hours on this, but we leave that to your discretion.

## Objective

Create a simple system in Unity to visualize the flow of blood along a configurable path. You may use [the provided .obj file](#) to represent the cells, supply your own cell model, or pick another representation (see videos below).

**Context:** Lighthouse has created a number of Unity-based cardiovascular simulations, where the flow of blood is important to representing a patient's heart function. Below are several ways people have visualized blood flow in the heart and body, you are welcome to use these as references or develop your own approach.

<https://www.youtube.com/watch?v=GwX41xm9esY>

<https://www.youtube.com/watch?v=bXZiUgZpt08>

<https://www.youtube.com/watch?v=6sshJuZvKIE>

<https://www.youtube.com/watch?v=9AsSzu9x4Ns&t=26s>

## Specification

The final product should:

- Show the way blood moves through space
  - The path the blood takes should be configurable in the Unity Inspector, and should allow for non-linear paths.
- The speed and color of the blood flow should be configurable in the Unity editor.

## Submission

Please upload your completed Unity project to a GitHub repository and share it with the following GitHub accounts:

benbarefield

mstevenson

AndrewCoggeshall

dsarno