CAP 6110: Augmented Reality Engineering

Homework 5

Due Sunday, March 28, 2021 by 11:59pm
(10 points)

Purpose

Learn how to design and implement an AR application for navigation.

Directions

1. Create a Unity 2019.4.17f1 (LTS) project and add Vuforia 9.6.4.

2. Create a new scene in the project and save it as "Homework 5" under "Assets" > "Scenes".

3. **Create an AR application with at least two instances of navigational aids with regard to at least one tracked object**. Acceptable types of navigational aids include:
    a. Viewpoint Guidance, such as a tunneling cue.
    b. Route Visualization, such as a path visualization.
    c. Multiple Perspectives, such as a top-down map.
    d. Transitional Interfaces, such as a zooming interface.

4. **Add at least one additional functional feature to your AR application**. Acceptable functional features include, but are not limited to other interactions, physics, animations, and user interfaces.

5. **Create a screen recording or video with commentary demonstrating your assignment**. The video should be NO LONGER THAN 4 MINUTES, but should clearly demonstrate and explain the following:
    a. Your AR application includes at least two instances of navigational aids.
    b. Your AR application includes at least one additional functional feature.

6. **Upload your video to YouTube as a Public or Unlisted video**.

7. Clean up your Unity project by removing any unnecessary assets from the "Assets" folder.

8. **Create a zip file (.ZIP ONLY) that contains your entire Unity project folder**, including all the folders (e.g., "Assets") and files (e.g., "Project.sln"). **Your zip file must be 500 MB OR LESS**.

9. Submit the zip file through Webcourses under "Assignments" > "**Homework 5**" and **provide a comment that includes the YouTube link to your video**.

10. If you are interested in sharing your submission with other students, also provide a comment that states your video can be shared with others.

Scoring

This assignment will be scored as indicated below. The maximum possible score is 10 points.

- ☐ Your AR application includes at least two instances of navigational aids, and your YouTube video demonstrates each instance. **+4 points per new instance (8 points maximum)**
- ☐ Your AR application includes at least one additional functional feature that is interesting, and your YouTube video demonstrates it. **+1 point**
- ☐ Your AR application is aesthetically high quality, and your YouTube video demonstrates it. **+1 point**

Deductions

This assignment will be deducted as indicated below. The minimum possible score is 0 points.

- ~~☐ Your submission is late. **-1 point**~~
- ☐ Your submission is more than one week late. **-5 points**
- ☐ Your submission is more than two weeks late. **-10 points**
- ☐ Your submission does not include a YouTube link to your video. **-2 points**
- ☐ Your video is longer than 4 minutes. **-2 points and -2 points per 30 seconds over**
- ☐ Your submission is more than 500 MB. **-1 point and -1 point per 50 MB over**
- ☐ Your submission is not a .ZIP file. **-2 points**
- ☐ Your submission does not contain your entire Unity project folder. **-5 points**
- ☐ Your submission is not a Unity 2019.4.17f1 (LTS) project. **-5 points**
- ☐ Your assignment is not saved as “Homework 5” under “Assets” > “Scenes”. **-2 points**

Academic Integrity

See the course syllabus for course policies regarding academic integrity.

These descriptions and deadlines are subject to change at the desertion of the instructor.