XR MOOC Specialization Course 3: Developing XR Applications with WebXR, Unity, & Unreal
Dr. Michael Nebeling

Assignment 1: 3D Scene

Welcome to your first honors track assignment in this course! Your task is to create a 3D scene in WebXR with A-Frame, Unity, or Unreal using the following steps:

1. **Sketch what you plan to recreate as a 3D scene (template)**
2. **Prototype your 3D scene with 2-3 3D primitives (scale, layout)**
3. **Add material to 3D primitives or replace with 3D models (fidelity)**
4. **Try out 2-3 different angles for the camera (perspective)**
5. **Optional: Add a particle system or 2-3 animations/lights/sounds**

Expected results

- Plan your 3D scene on paper and modeling it after your idea
- Systematic approach to creating new 3D scenes for VR/AR
- Better understanding of 3D objects and transforms (but no interactions yet…)

Submission

Please submit the following information and supplementary materials (as PDF document or PNG image, optionally MP4 video) to the 3D Scenes Gallery:

Title: Choose a descriptive title based on your idea. This text will appear as the title of the submission in the gallery.

Category: Choose VR or AR to categorize the 3D scene you are working towards, or XR if still unsure.

Platform: Choose the XR platform (WebXR, Unity, Unreal) you have used to create the 3D scene.

Summary of Key Interactions & Reflection:

- **Key Interactions**: Summarize your ideas for the 3D scene. Describe what the key interaction is or will be in this scene as you plan to adapt it for VR/AR. You should be clear about which of the things are placeholders for future content and interactions and how you expect them to change in future iterations for VR and AR.
- **Reflection:** Reflect on the development process with your chosen platform and toolkits. What was easy/hard? Where did you get stuck?
- **Questions**: Ask for feedback or advice. You should indicate whether you are done or if you are looking for help from others. In either case, it's important you ask specific questions about your solution / problem.

(continued on the next page)

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Attachments:

- **Photo/screenshot of sketch**: Submit the sketch that you designed your scene after. This is important as it provides a reference both for you and for other learners that are asked to provide feedback on your work.
- **Screenshots of 3D scene**: Submit up to two screenshots of your 3D scene that clearly illustrate the main components.
- **(optional) Screenshot of tool**: Optionally, you can show how you used your chosen platform and toolkits, which can be helpful if you're looking for help.
- **(optional) Demo video**: Optionally, submit a short narrated screen capture of the VR experience from the first person, so with you previewing your scene in 3D or running it on a VR device. **Try to stay below two (2) minutes; the total upload limit is 50 MB.**