# Introduction to 3D Interactive Development

**Level**: Beginner

**Prerequisites**: No prior experience required

**Duration**: 3 days

The Introduction to 3D Interactive Development workshop features a small scale kitchen configurator in the general style of what can be found on home improvement websites such as Lowes, Ikea, and Home Depot.
Participants in this workshop will focus on how to create high quality 3D interactions in Unity in an efficient and optimized way while building this simple, yet sophisticated configurator.

Although this workshop focuses on an AEC aligned project, the skills built within it will apply to anyone who is looking to understand how to create robust interactive applications in Unity.

## Learning Objectives and Outcomes

**Learn how to navigate in the Unity Editor**
- Identify the different Editor windows and their purposes
- Use common hotkeys and shortcuts to navigate in the Editor
- Configure a Unity Project for 3D development

**Identify key features of the Unity 3D toolset**
- Create and configure physically based materials
- Use imported assets to build modular scenes
- Create scene component Prefabs for reuse throughout the Project
- Configure lights and settings to achieve realistic effects
- Use the Post Processing Stack to enhance visual fidelity

**Develop interactive mechanics**
- Integrate scripts to create a controller with keyboard and touch input
- Utilize Cinemachine to create a free moving scene camera
- Build a UI to display Prefab data and receive input
- Integrate scripts with Prefabbed assets to create customizable components

**Publish 3D applications**
- Publish the completed app for various platforms

## Activities

- Introduction: Workshop Overview and Learning Action Plan
- Activity 1: Project Setup
- Activity 2: Scene Creation and lighting
- Activity 3: Creating the customization functionality
- Activity 4: Creating User Interfaces and Working with the Camera
- Activity 5: Completing the User Interface
- Activity 6: Final Polish and Publishing
- Conclusion: Learning Action Plan and Further Learning

## What to Bring

- Each participant will need to bring a laptop (Windows or OSX), power supply (including any necessary international adapters), and mouse.
- Install Unity prior to the workshop (minimum requirement of Unity 2017.1).
- Instructors will need access to Autodesk Maya or 3DS Max to demonstrate the FBX Exporter round trip workflow to participants.
- Access to Maya and 3DS Max is helpful, but optional for participants.