Unity Virtual Reality Projects

Explore the world of virtual reality by building immersive and fun VR projects using Unity 3D.

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About This Book

Learn the basic principles of virtual reality applications and get to know how they differ from games and desktop apps. Build various types of VR experiences, including diorama, first-person characters, riding on rails, 360 degree projections, and social VR. A project-based guide that teaches you to use Unity to develop VR applications, which can be experienced with devices such as the Oculus Rift or Google Cardboard.

Who This Book Is For

If you’re a non-programmer unfamiliar with 3D computer graphics, or experienced in both but new to virtual reality, and are interested in building your own VR games or applications then this book is for you. Any experience in Unity is an advantage.

What You Will Learn

Create 3D scenes with Unity and Blender while learning about world space and scale. Build and run VR applications for consumer headsets including Oculus Rift and Google Cardboard. Build interactive environments with physics, gravity, animations, and lighting using the Unity engine. Experiment with various user interface (UI) techniques that you can use in your VR applications. Implement the first-person and third-person experiences that use only head motion gestures for input. Create animated walkthroughs, use 360-degree media, and build multi-user social VR experiences.

Learn about the technology and psychology of VR including rendering, performance and VR motion sickness. Gain introductory and advanced experience in Unity programming with the C# language.

In Detail

What is consumer “virtual reality”? Wearing a head-mounted display you view stereoscopic 3D scenes. You can look around by moving your head, and walk around using hand controls or motion sensors. You are engaged in a fully immersive experience. On the other hand, Unity is a powerful game development engine that provides a rich set of features such as visual lighting, materials, physics, audio, special effects, and animation for creating 2D and 3D games. Unity 5 has become the leading platform for building virtual reality games, applications and experiences for this new generation of consumer VR devices.

Using a practical and project-based approach, this book will educate you about the specifics of virtual reality development in Unity. You will learn how to use Unity to develop VR applications which can be experienced with devices such as the Oculus Rift or Google Cardboard. We will then learn how to engage with virtual worlds from a third person and first person character point of view. Furthermore, you will explore the technical considerations especially important and possibly unique to VR. The projects in the book will demonstrate how to build a variety of VR experiences. You will be diving into the Unity 3D game engine via the interactive Unity Editor as well as C-Sharp programming.

By the end of the book, you will be equipped to develop rich, interactive virtual reality experiences using Unity.

So, let's get to it!

Style and approach

This book takes a...
practical, project-based approach to teach specifics of virtual reality development in Unity. Using a reader-friendly approach, this book will not only provide detailed step-by-step instructions but also discuss the broader context and applications covered within.

**Book Information**

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**Customer Reviews**

this book focuses solely on Virtual Reality (VR) over Augmented Reality (AR) solutions. In its pages youâ€™ll discover how VR apps and games differ from their desktop counterparts and what really goes in to making them (especially focusing on scale!, very important), walks you through several different types of VR solutions like Dioramaâ€™s, First person controllers, riding on rails (like a rollercoaster), 360 projections (you are IN the painting) and social VR. Youâ€™ll even delve in to several VR implementations inside Unity 5 such as the Oculus rift and (for those of you without a few hundred Â£ or $ to spare) Google cardboard. Virtually everything for everyone As expected, the beginning chapter talks thoroughly about what VR is and what it isnâ€™t, together with an in-depth comparison between VR and AR. It also goes through all the different VR style experiences and how these apply to both apps and games. Finally it covers some of the technical skills youâ€™ll need (yes you do need Math!) to build effective VR solutions. Objects and scale A no-nonsense intro to Unity (practically just one page, which I like because too many titles waffle on about â€œinstalling unityâ€) followed by a deep dive into creating your first VR scene, before finishing off with a high level walkthrough creating a basic asset in Blender (a free 3D modelling tool) and importing it in to Unity, keeping an eye on the all-important scale (I did say scale is important!) VR
Build and run So you have your VR scene, now what? Time to get it on a device, whatever you
have to hand.

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