

1. Record Nr.	UNINA9910974115303321
Autore	Wang Rui (Software engineer)
Titolo	Augmented reality with Kinect : develop your own hands-free and attractive augmented reality applications with Microsoft Kinect / / Rui Wang
Pubbl/distr/stampa	Birmingham, : Packt Pub., 2013
ISBN	9781849694391 1849694397
Edizione	[1st ed.]
Descrizione fisica	1 online resource (122 p.)
Collana	Community experience distilled
Disciplina	006
Soggetti	Kinect (Microcontroller) - Programming Multimodal user interfaces (Computer systems)
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	Intro -- Augmented Reality with Kinect -- Table of Contents -- Augmented Reality with Kinect -- Credits -- About the Author -- About the Reviewers -- www.PacktPub.com -- Support files, eBooks, discount offers and more -- Why Subscribe? -- Free Access for Packt account holders -- Preface -- What this book covers -- What you need for this book -- Who this book is for -- Conventions -- Reader feedback -- Customer support -- Downloading the example code -- Errata -- Piracy -- Questions -- 1. Getting Started with Kinect -- Installation of Kinect -- Setting up your Kinect software on PCs -- Why did I do that? -- The idea of the AR-based Fruit Ninja game -- Summary -- 2. Creating Your First Program -- Preparing the development environment -- Building the Visual Studio project -- Starting the device -- Initializing and using Kinect in C++ -- Understanding the code -- Additional information -- Summary -- 3. Rendering the Player -- Choosing image stream types -- Obtaining color and depth images -- Drawing color and depth as textures -- Understanding the code -- An incorrect way to combine depth and color -- A traditional way for background subtraction -- Understanding the code -- Aligning color with depth -- Generating a color image from depth -- Understanding the code -- Additional information -- Using a green screen with Kinect -- Making a magic photographer --

Understanding the code -- Additional information -- Summary -- 4. Skeletal Motion and Face Tracking -- Understanding skeletal mapping -- Obtaining joint positions -- Drawing the skeleton -- Understanding the code -- Drawing the linetrails following the hands -- Drawing the path for specified joints -- Understanding the code -- Face tracking in Kinect -- Detecting a face from the camera -- Detecting and drawing the face rectangle -- Understanding the code -- Constructing the face model. Drawing the parametric face model -- Understanding the code -- Summary -- 5. Designing a Touchable User Interface -- Multitouch systems -- Locating the cursors -- Drawing cursors from two hands -- Understanding the code -- Additional information -- Common touching gestures -- Recognizing holding and swiping gestures -- Drawing cursors using two hands -- Understanding the code -- Additional information -- Sending cursors to external applications -- Emulating Windows mouse with cursors -- Understanding the code -- Summary -- 6. Implementing the Scene and Gameplay -- Integrating the current code -- Integrating existing elements in a scene -- Understanding the code -- Cutting the fruits -- Adding and handling fruit objects -- Understanding the code -- Playing the game -- Adding simple game logic -- Understanding the code -- Additional information -- Summary -- A. Where to Go from Here -- libfreenect - the pioneer of Kinect middleware -- OpenNI - a complete and powerful Kinect middleware -- Free and open source resources -- Commercial products using Kinect -- Index.

Sommario/riassunto

This book is a mini tutorial with plenty of code examples and strategies to give you many options when building your own applications. This book is meant for readers who are familiar with C/C++ programming and want to write simple programs with Kinect. The standard template library can also be used as it is simple enough to understand.
