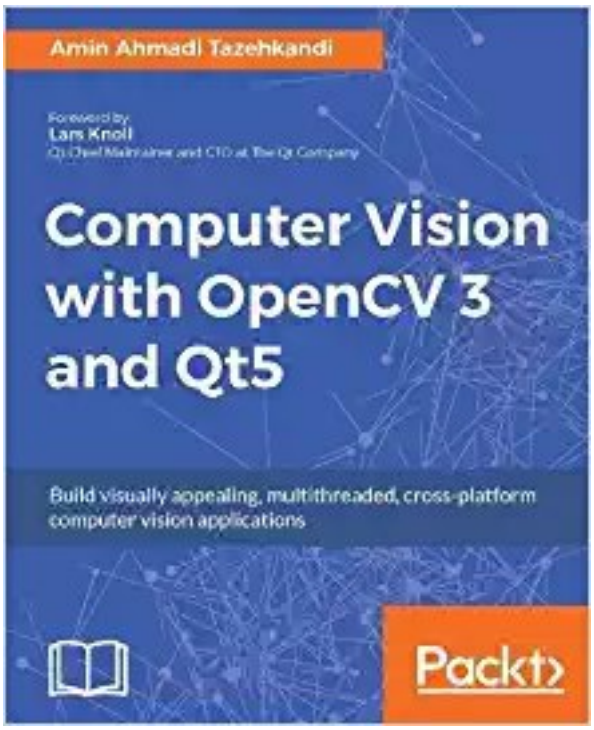
Computer Vision with OpenCV 3 and Qt5: Build visually appealing, multithreaded, cross-platform computer vision applications



Computer Vision with OpenCV 3 and Qt5: Build visually appealing, multithreaded, cross-platform computer vision applications_下载链接1_

著者:Amin Ahmadi Tazehkandi

出版者:Packt Publishing

出版时间:2018-1-2

装帧:Paperback

isbn:9781788472395

Key Features

Start creating robust applications with the power of OpenCV and Qt combinedLearn from scratch how to develop cross-platform computer vision applicationsAccentuate

your OpenCV applications by developing them with Qt

Book Description

Developers have been using OpenCV library to develop computer vision applications for a long time. However, they now need a more effective tool to get the job done and in a much better and modern way. Qt is one of the major frameworks available for this task at the moment.

This book will teach you to develop applications with the combination of OpenCV 3 and Qt5. This book will teach you to create cross-platform computer vision applications. We'll begin by introducing Qt, its IDE, and its SDK. Next you'll learn how to use the OpenCV API to integrate both tools, and see how to configure Qt to use OpenCV. You'll go on to build a full-fledged computer vision application throughout the book.

Later, you'll create a stunning UI application using the Qt widgets technology, where you'll display the images after they are processed in an efficient way. At the end of the book, you'll learn how to convert OpenCV Mat to Qt QImage. You'll also see how to efficiently process images to filter them, transform them, detect or track objects as well as analyze video. You'll become better at developing OpenCV applications.

What you will learn

Get an introduction to Qt IDE and SDKBe introduced to OpenCV and see how to communicate between OpenCV and QtUnderstand how to create UI using Qt WidgetsKnow to develop cross-platform applications using OpenCV 3 and Qt 5Explore the multithreaded application development features of Qt5Improve OpenCV 3 application development using Qt5Build, test, and deploy Qt and OpenCV apps, either dynamically or staticallySee Computer Vision technologies such as filtering and transformation of images, detecting and matching objects, template matching, object tracking, video and motion analysis, and much moreBe introduced to QML and Qt Quick for iOS and Android application development

Who This Book Is For

This book is for readers interested in building computer vision applications. Intermediate knowledge of C++ programming is expected. Even though no knowledge of Qt5 and OpenCV 3 is assumed, if you're familiar with these frameworks, you'll benefit.

Table of Contents

Introduction to Qt and OpenCVCreating our first Qt and OpenCV projectCreating a comprehensive Qt+OpenCV projectMat and QimageThe Graphics View FrameworkImage Processing in OpenCVFeatures and DescriptorsMulti-ThreadingVideo AnalysisDebugging and TestingStatic Linking and DeploymentComputer Vision Apps for Android and iOS

作者介绍:

Amin completed his Software Engineering studies in Iran. Being born and raised in Tabriz, a highly industrial city, and as a member of a family full of engineers and

inventors, he immediately dived into the world of software development and programming after entering the university in 2004. In 2012 he moved to Istanbul, Turkey, where he studied Control Engineering and got involved in a number of highly successful commercial and research projects involving computer vision. He is a longtime blogger and supporter of the open-source and cross-platform computer vision community with a long list of achievements including a Hackathon award, an IEEE best application for a proceeding award and a number of largely downloaded applications for Windows, macOS, Android and so on. Amin currently resides in Vienna, Austria, where he continues to research and write about cross-platform computer vision software development.

目录:

标签

图像

CV

评论

Computer Vision with OpenCV 3 and Qt5: Build visually appealing, multithreaded, cross-platform computer vision applications_下载链接1_

书评

Computer Vision with OpenCV 3 and Qt5: Build visually appealing, multithreaded, cross-platform computer vision applications_下载链接1_