

GUI Design for Android Apps



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Ryan Cohen & Tao Wang

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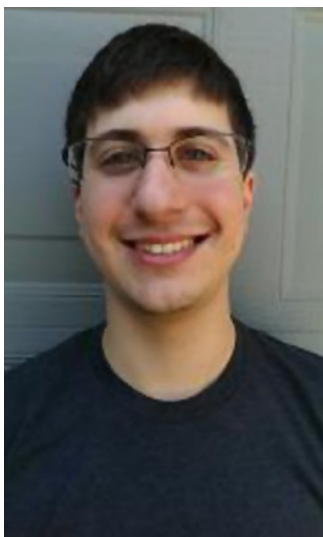
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About the Lead Project Editor



Ryan Cohen is the contributing editor responsible for leading the international team of content contributors who created this Intel learning resource; he's also an Android enthusiast and Portland State graduate. Ryan has been following Android since 2011 when he made the switch from Apple iOS. When he is not writing about Android, he spends his time researching anything and everything new in the world of Android.

About the Lead Contributing Author



Tao Wang came to United States as a Ph.D. student to study at Oregon State University in 1993. He has been a software engineer with Intel Corporation since 2002. Tao began blogging and writing about Android in 2008; and, since 2011, he has served as a technical collateral manager for the Intel Android Developer Zone, the developer resource for all things Android at Intel. In his spare time, Tao also runs his own mobile app/client education startup called E-k12. He follows closely the latest progress in application development, as well as testing/debugging/performance optimization for mobile devices and Android on x86 platforms. Tao is skilled in many platforms, including Android SDK and NDK; Intel Android tools; game engines such as Cocos2D-x, AndEngine, and libgdx; OpenGL ES;

RenderScript; and Android Runtime. His other areas of interest include mobile Internet technologies such as online content management, cloud-based mobile technologies, embedded devices, robotics, and mobile learning on the go.

About the Technical Reviewer



Xavier Hallade is Developer Evangelist for the Intel Software and Services Group in Paris, France. Since 2012 and the public release of the first Android smartphone based on an Intel platform, he has been helping Android developers improve their support for new hardware and technologies made or supported by Intel.

Introduction

This mini book is a collection of four chapters pulled from *Android Application Development for the Intel Platform*, designed to give developers an introduction to creating great user interfaces for their Android applications. These chapters cover topics ranging from the differences between developing UIs for desktop systems and embedded systems to optimizing the UI of applications for touchscreens.

Chapter 1

This chapter introduces the general GUI design method for desktop systems and then shows how designing the UI and UX for embedded systems is different. Next, it discusses general methods and principles of GUI design for Android applications and how to develop user interfaces suitable for typical user interaction on Android smartphone and tablets.

Chapter 2

This chapter introduces Android interface design by having you create a simple application called GuiExam. You learn about the state transitions of activities, the Context class, intents, and the relationship between applications and activities. Finally, the chapter shows how to use the layout as an interface by changing the layout file `activity_main.xml`, and how the button, event, and inner event listeners work.

Chapter 3

In this chapter, you learn how to create an application with multiple activities. This application is used to introduce the explicit and implicit trigger mechanisms of activities. Next, you see an example of an application with parameters triggered by an activity in a different application, which will help you understand of the exchange mechanism for the activity's parameters.

Chapter 4

This chapter introduces the basic framework of drawing in the view, how the drawing framework responds to touchscreen input, and how to control the display of the view as well as the multi-touch code framework. Examples illustrate the multi-touch programming framework and keyboard-input responses. You also learn how to respond to hardware buttons on Android devices, such as Volume +, Volume -, Power, Home, Menu, Back, and Search. After that, you see the three different dialog boxes for Android, including the activity dialog theme, specific dialog classes, and toast reminders. Finally, you learn how to change application property settings.