

## Android Application Skill

| ID Category   | ID Subcategory           | ID Item                        | ID Skill Item                                   |                                                                                  |
|---------------|--------------------------|--------------------------------|-------------------------------------------------|----------------------------------------------------------------------------------|
| 1 Application | 1 Android Framework      | 1 System Architecture          | 1 System Architecture Overview                  |                                                                                  |
|               |                          |                                | 2 Licensing                                     |                                                                                  |
|               |                          | 2 User Interface               | 1 Menus                                         | Option menu and dialog menus                                                     |
|               |                          |                                | 2 Dialogs                                       | Various dialogs                                                                  |
|               |                          |                                | 3 Event Processing                              | Button, key and motion events                                                    |
|               |                          |                                | 4 Notifications                                 | Notification bar, clock display etc.                                             |
|               |                          |                                | 5 Styles and Themes                             | Color sets                                                                       |
|               |                          |                                | 6 Views                                         | View object                                                                      |
|               |                          |                                | 7 Graphics(2D & 3D)                             | Drawing on a Canvas, OpenGL drawing                                              |
|               |                          | 3 Resource Files               | 1 Android Manifest                              | Application name, execution method, main Activity definition                     |
|               |                          |                                | 2 XML Formats                                   |                                                                                  |
|               |                          |                                | 3 Resource Aliases and Internationalization     | Resource substitutions using the Alternative option                              |
|               |                          |                                | 4 Security and Permissions                      | Security concepts                                                                |
|               |                          | 4 Application Components       | 1 Intent and Intent Filters                     | The role of Intents, linking between Applications, explicit and explicit intents |
|               |                          |                                | 2 Activity                                      | Lifecycle                                                                        |
|               |                          |                                | 3 Content Providers                             |                                                                                  |
|               |                          |                                | 4 Service                                       | Lifecycle                                                                        |
|               |                          |                                | 5 BroadcastReceiver                             |                                                                                  |
|               |                          | 5 Storage                      | 1 File I/O Overview                             |                                                                                  |
|               |                          |                                | 2 Preferences                                   | Saving and reading application data                                              |
|               |                          |                                | 3 SQLite                                        | Using SQL (in the database)                                                      |
|               |                          | 6 Communication                | 1 Network Protocols (HTTP, TCP/IP)              | java.net and android.net packages                                                |
|               |                          |                                | 2 Bluetooth                                     | android.bluetooth package                                                        |
|               |                          |                                | 3 Wi-fi                                         | android's Wi-Fi package                                                          |
|               |                          | 7 External Devices and Sensors | 1 GPS                                           | GPS sensor package                                                               |
|               |                          |                                | 2 Sensors                                       | sensor package                                                                   |
|               |                          | 8 Multimedia                   | 1 Audio                                         | Using media files                                                                |
|               |                          |                                | 2 Video                                         | Using media files                                                                |
|               |                          | 9 Testing                      | 1 Junit Framework                               | Automated testing                                                                |
|               | 2 Application Publishing | 10 Native Code                 | 1 JNI                                           |                                                                                  |
|               |                          |                                | 2 Script Language(ASE)                          |                                                                                  |
|               |                          |                                | 3 NDK Overview                                  |                                                                                  |
|               |                          | 1 Application Management       | 1 Versioning                                    | Recording version in the manifest file                                           |
|               |                          |                                | 2 Private Key Generation                        | Using keytool to make a private key                                              |
|               |                          |                                | 3 Map API Key Registration                      | Registering to use MapView                                                       |
|               |                          | 2 Application Distribution     | 1 Signing                                       | Signing an apk archive, cannot install without it                                |
|               |                          |                                | 2 Updating                                      | Automatic update from the Android Market by version                              |
|               |                          | 3 Supporting Functions         | 1 Eclipse                                       |                                                                                  |
|               |                          | 1 Development Functions        | 2 Android Development Tools Plugin (adt)        |                                                                                  |
|               |                          |                                | 3 layoutopt                                     | A diagnostic tool for layout files                                               |
|               |                          |                                | 4 Draw 9-patch                                  | Image editing tool                                                               |
|               |                          |                                | 5 Android Asset Packaging Tool (aapt)           | Create an apk file, archival                                                     |
|               |                          |                                | 6 Android Interface Description Language (aidl) | Defining interfaces with different layers                                        |
|               |                          |                                | 7 sqlite3                                       | SQLite                                                                           |
|               |                          |                                | 8 dx                                            | A tool to convert class files to dex files                                       |
|               |                          |                                | 9 zipalign                                      | A tool to optimize an apk file                                                   |
|               |                          | 2 Debug Functions              | 1 Android Emulator                              |                                                                                  |
|               |                          |                                | 2 Android Virtual Devices (AVDs)                |                                                                                  |
|               |                          |                                | 3 Hierarchy Viewer                              | Tool to display a layout file hierarchy                                          |
|               |                          |                                | 4 Dalvik Debug Monitor Server (DDMS)            |                                                                                  |
|               |                          |                                | 5 Android Debug Bridge (adb)                    |                                                                                  |
|               |                          |                                | 6 Traceview                                     | Trace for android applications                                                   |
|               |                          |                                | 7 mksdcard                                      | Tool to create an SD card image                                                  |
|               |                          |                                | 8 UI/Application Exerciser Monkey               | The 'monkey' test tool                                                           |
|               |                          |                                | 9 android                                       | Command for managing AVD and SDK                                                 |