Qualcomm Developer Project ImageOCR-demo

Project Submission

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| **Project Title**\* | **ImageOCR** | |
| **Images**  *Upload up to 5 images of your project*  *Please submit/send the original JPEG/PNG files for all images included in the document* | **Qualcomm® RB1**  RB2  [Alt tag: “StyleTransfer-demo using The Qualcomm® QRB2210 SOC Open Kit”]  **Type-c usb line**   |  | | --- | | **typc** |   [Alt tag: “using the USB line to develop on Qualcomm® QRB2210 SOC Open Kit” ]  **charger**  charger  [Alt tag: “using round-hole charger to power Qualcomm® QRB2210 SOC Open Kit”] | |
| **Description**\*  *High level description of the project* ***(75 words or less)*** | The project builds on the QRB2210 development kit system source code and runs on the QRB2210 development board, making full use of the diverse and powerful connection and computing power of the development kit. Use Opencv to load the image, perform preprocessing such as binarization and denoising of the image, and perform text recognition processing with the preprocessed image through Tesseract-OCR, and save the result as a txt file. | |
| **Objective**   * *What inspired you to create this project?* * *What is your desired outcome?* | It is hoped that the text information in the picture can be identified and applied to some scenarios that need to extract the information in the picture. It is expected that the Chinese and English text information in the picture can be accurately recognized, and the text information will be output for subsequent scenes. | |
| **Materials Required / Parts List / Tools** | Part Name | Link to purchase |
| Qualcomm® QRB2210 SOC Open Kit | https://www.thundercomm.com/zh/product/qualcomm-robotics-rb1-platform/ |
| USB Line | https://item.jd.com/40759941966.html |
| Charger | https://www.thundercomm.com/zh/product/qualcomm-robotics-rb1-platform/ |
| **Source Code / Source Examples / Application Executable**  *Link to open source / shareable code repository* | Description | Link |
| Source Code | https://github.com/ThunderSoft-XA/RB1-imageOCR |
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| **Additional Resources**  *List related links or resources such as websites, videos, presentations, or other materials* | Resource Title | Link or File Name (and provide file) |
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| **Build / Assembly Instructions** | Sample outline:   1. After configuring the RB1 dedicated SDK, create a cross-compilation environment. 2. In the cross-compilation environment, configure the third-party library environment required by TesserAct, such as Leptonica, Libgif, Libjpeg, Lippng, Littiff, Zlib, etc. 3. In the cross-compilation environment, compile the open-source library tesseract, and generate compilation products such as header files and lib libraries; 4. In the cross-compilation environment, products are directly generated through Cmake compilation | |
|  | Sample outline:   1. How does it work? 2. Prepare English text pictures or Chinese text pictures and put them in the image\_ocr executable program sibling directory; 3. Prepare dynamic library files required by image\_ocr executable programs such as libgif.so, liblept.so, and libtesseract.so, and place them in the same directory of the image\_ocr executable program; 4. Prepare the tesseract language model folder tessdata and place it in the image\_ocr executable program sibling directory; 5. To execute image\_ocr executable program, you need to take two parameters: 6. The first parameter is the image path name, which can be carried according to the actual situation; 7. The second parameter is the loading image type, where 1 is an English text picture and 2 is a Chinese text picture, which can be carried according to the actual situation; | |
| **Usage Instructions** | The Demo running results are as follows：  final result:  8  7 | |
| **Contributor(s) Info**  *Feel free to include headshots!* | Name | Title  Company |
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Filters and Tags for QDN projects page

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| **Platform/Hardware** | CSR 101x/102x Bluetooth  DragonBoard 410c  mangOH Red/Yellow  √ Qualcomm QRB2210 | MDM920x LTE for IoT  QCA-402x WiFi/BLE/Zigbee  Qualcomm Robotics RBx Dev Kit |
| **Software Tools** | 3D Audio Plugin for Unity  Adreno GPU SDK  Hexagon DSP SDK | √ Neural Processing SDK for AI  　Snapdragon Profiler |
| **Operating System** | Android  √ Linux  ThreadX RTOS | Ubuntu Core  Windows 10 IoT Core |
| **Cloud Services/Platform** | Sierra Wireless AirVantage  Gizwits Cloud Platform  AT&T M2X  IBM Bluemix | IBM Watson IoT  Microsoft Azure IoT  Amazon AWS IoT |
| **Skill Level Required** | Advanced  Beginner  √ Intermediate |  |
| **Areas of Focus** | 3D Printing & Modeling  Alexa Voice Service  √ Artificial Intelligence  Bluetooth  Computer Vision  Digital Signage  Education  √ Embedded  Gaming | Healthcare  √ IoT  Robotics  Security  Sensors  Smart Cities  Smart Home  Toys |

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