Qualcomm Developer Project AIMET-Setup

Project Submission

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| **Project Title**\* | **AIMET-Setup** | |
| **Images**  *Upload up to 5 images of your project*  *Please submit/send the original JPEG/PNG files for all images included in the document* | AIMET Workflow introduction  https://github.com/quic/aimet/raw/develop/Docs/images/how-it-works.png | |
| **Description**\*  *High level description of the project* ***(75 words or less)*** | Show how to use Google Colab and Install pytorch AIMET package in Google Colab environment. | |
| **Objective**   * *What inspired you to create this project?* * *What is your desired outcome?* | Google Colab is a product from Google Research. Colab allows anybody to write and execute arbitrary python code through the browser, and is especially well suited to machine learning, data analysis and education. More technically, Colab is a hosted Jupyter notebook service that requires no setup to use, while providing free access to computing resources including GPUs.  AIMET is a library that provides advanced model quantization and compression techniques for trained neural network models. It provides features that have been proven to improve run-time performance of deep learning neural network models with lower compute and memory requirements and minimal impact to task accuracy.  This project shows how to install pytorch AIMET packages in Google Colab environment, let users have a preliminary understanding of AIMET. | |
| **Materials Required / Parts List / Tools** | Part Name | Link to purchase |
| Google Colab | https://colab.research.google.com |
| AIMET Packages | https://github.com/quic/aimet/releases/tag/1.16.1.py37 |
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| **Source Code / Source Examples / Application Executable**  *Link to open source / shareable code repository* | Description | Link |
| [Source Examples](https://github.com/canyudeguang/Home_Automation) | [https://github.com/ThunderSoft-XA](https://github.com/ThunderSoft-XA/demo-Smart-Motion-detector)/AIMET-Setup.git |
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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. Installation steps   1)Set up Google Colab  2)Install pytorch AIMET packages in Google Colab  Refer to Detailed\_introduction\_of\_AIMET\_Setup.docx for detail. | |
| **Usage Instructions** | Sample outline:  Result(show the pytorch CPU Environment Validation):    Result(show the pytorch GPU Environment Validation): | |
| **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 | ☐ MDM920x LTE for IoT  ☐ QCA-402x WiFi/BLE/Zigbee |
| **Software Tools** | ☐ 3D Audio Plugin for Unity  ☐ Adreno GPU SDK  ☐ Hexagon DSP SDK | √ AIMET  ☐ 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  √ Google Colab |
| **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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