ONNX Training Workshop Introduction

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IBM **Developer**

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Plan for the workshop

Intro by Svetlana (IBM)

Proposal by Wei-Sheng Chin (Microsoft)

Test report by Chin Huang (IBM)

General discussion (**All**)

Create 5-min summary for readout (**All**)

ONNX Training Working group history and status

Created in February 2019

Formally led by IBM, Webex meetings on Tuesdays at 10:30 am US Pacific time.

Gitter room for discussions, online folder for materials.

Exit criteria agreed on (next slide).

Chin Huang suggested possible use cases (slide 5).

Wei-Sheng created a proposal, then updated it to allow GANs, will present.

Chin Huang created a test for ONNX→TF, we need more tests.

WG exit criteria

1. Provide and document the benefits of training in ONNX.
2. Define use cases that should be enabled by this work.
3. Determine necessary new operators needed for 2 (other new operators may be needed later).
4. Determine necessary changes to ONNX computation graph needed for 2.
5. Determine additional information needed to be stored in ONNX to enable training and saving intermediate states.
6. Work with Pipelines and Quantization working groups to incorporate their advances into our work.
7. Create pull requests for 3-6, including code, documentation, unit tests, integration tests.
8. Recommend and document how ONNX converters and runtime could support the new features.
9. Determine and propose whether training SIG makes sense.
10. Recommend future use cases and extensions beyond the initial milestone.
11. Write a final report for the working group.

Brief summary of use cases for ONNX training

Originally proposed:

– Interoperable models for fast training
– Transfer learning
– Standardize optimizer configurations and parameters
– Programming in Keras
– Do everything in ONNX

Currently working on (phase 1):

- Express one training iteration in ONNX

Plan for phase 2: express entire training in ONNX, seems to fit UC1?

And now: Wei-Sheng Chin and his proposal