

ONNX

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November 2018

1 Method

onnx graph explain

1. onnx graph includes onnx node list, graph input and graph output.
2. onnx node list has operator nodes and constant nodes
3. constant nodes just have node output, no node input
4. operator nodes have node inputs and node outputs
5. onnx node list is arranged in Topological order.

singa computational graph to onnx graph

1. iterate every node of computational graph of singa
2. only iterate on operator node from singa output node to singa the input node
3. for each operator node in singa, add this node to onnx node list
4. this onnx node output's name is this operator name, its input name is this operator's fathers' name
5. if his father nodes include operator node and constant node, for operator nodes, we do nothing. for constant nodes, we add these constant nodes to onnx node list. Constant nodes' names are their singa nodes' names.
6. save this onnx node list as onnx graph
7. save singa input and output as onnx graph input and output

onnx graph to singa computational graph

1. since the onnx node list is arranged in Topological order, we can simply add onnx node list to singa computational graph orderly.