



ONNX

OPERATORS SIG

BREAKOUT SESSION

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AGENDA

- Operators SIG
- Add new operator update
- Proposal / improvement
- Discussion: Version converter
- Discussion: PR and Issues

GOAL

Keep Up

Keep up with the latest progress in AI

Quality

Improve the quality of ONNX Operators

Clarity

Reduce ambiguity

Size

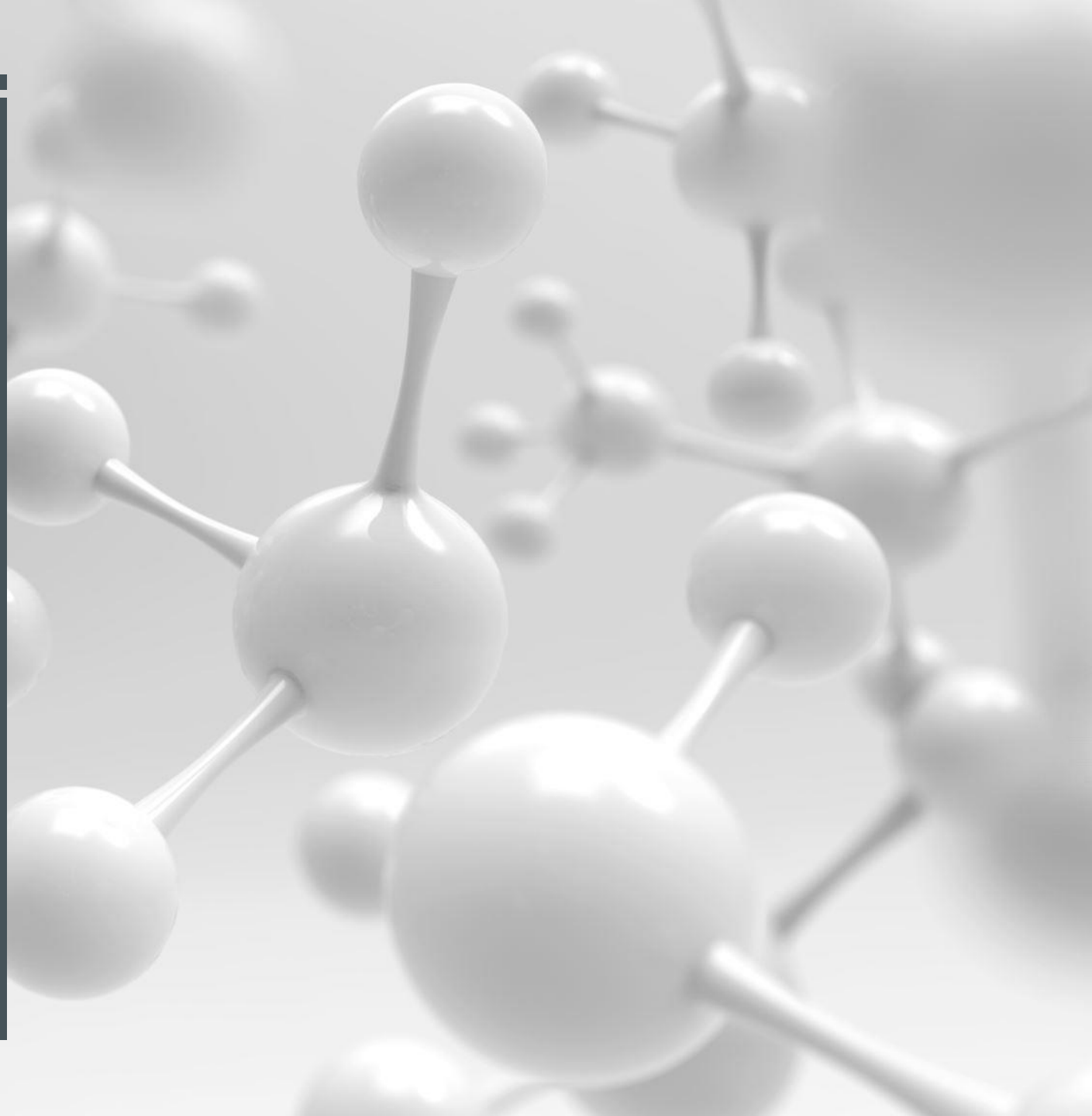
Avoid bloating ONNX spec

PRs and Issues

Keep up with PRs and operator issues

PARTICIPANTS

- Akinlawon Solomon (Qualcomm)
- Darren Crews (Intel)
- Dilip Sequeira (NVidia)
- Ganesan Ramalingam (Microsoft)
- Itay Hubara (Habana)
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- Simon Long (GraphCore)
- Spandan Tiwari (Microsoft)
- Wei-Sheng Chin (Microsoft)
- Weiming Zhao (Alibaba)
- Liqun Fu (Microsoft)



COMMUNICATION

- Slack channel: <https://slack.lfai.foundation> and join onnx-operators
- Discussions on GitHub PRs and issues
- Meetings announcement are on Slack and Gitter
- Docs and meeting notes are in onnx/sigs
<https://github.com/onnx/sigs/tree/master/operators>
- Deprecated: Gitter channel: <https://gitter.im/onnx/operators>



ADDING NEW OPERATOR ISSUE

- Reference implementation in Python isn't enough.
- Runtime and framework writers, start implementing new operators close or after ONNX release.
 - Any issue cause delay to the release.
 - Or worse, cause a patch release.
- Operator behavior might not match existing framework, especially in corner cases.



ADDING NEW OPERATOR UPDATE

- Unit tests need to have the same coverage as the original framework.
- Test data need to be generated from the original framework to match behavior.
- [Optional] verify the new operator/function in a runtime/framework that support ONNX.



PROPOSAL

- Feel free to propose any improvements, such as:
 - Better testing, validation and coverage of ONNX operators.
 - Better documentation generation.
 - More operators.
 - A lot of existing manual steps need automation.
- For any big proposal, you will be invited in the SIG meeting to present it.


GET INVOLVED: SUBMIT AND REVIEW PRS

Filters


☐ Clear current search query, filters, and sorts

☐ 107 Open ☒ 77 Closed


Author ▾

☐  Exporting the operator hardsigmoid to ONNX opset version 12 is not supported. Please open ONNX export support for the missing operator. enhancement operator

#2970 opened on Aug 22 by glenn-jocher

☐  adaptive_avg_pool2d from Pytorch enhancement operator


#2957 opened on Aug 14 by ghost

☐  operator MaxPool output tensor shape is ambiguously documented. documentation operator


#2927 opened on Jul 26 by srohit0

Filters


☐ Clear current search query, filters, and sorts

☐  21 Open ☒ 65 Closed


Author ▾ Label ▾

☐  Allow recurrent operations to be batchwise (reprise) operator

#2922 opened on Jul 24 by matteosal • Review required

☐  Feature/ Add operators fft and ifft enhancement operator

#2625 opened on Feb 26 by jeremyschoy • Review required

☐  Update Reshape op: Remove special meaning of 0 dims operator

#2553 opened on Jan 15 by jignparn • Review required

PR REVIEW

- PRs should be marked with the **Operator** label
 - <https://github.com/onnx/onnx/pulls?q=is:pr+is:open+label:operator>
- Ops Contributors Group should review the PRs according to guidelines
- Mature PRs can be discussed during bi-weekly sync
- Final approval by member of **SIG-operators-approvers** group

GITHUB DISCUSSION ISSUES

- Many open discussions marked with **Operator** label
- Ops Contributors Group should be active in discussions and encourage submission of PRs
- We should decide which discussions can be closed
- Still looking for best way to triage this large number of open issues



VERSION CONVERTER

- Used to convert from one OPSet to another or vice versa.
- Currently, it is outdated.
- Should we enforce every operator PR to update the version converter?

TIME MAJOR FLAG FOR RECURRENT

- Issue and PR:
 - <https://github.com/onnx/onnx/issues/2159>
 - <https://github.com/onnx/onnx/pull/2922>
 - <https://github.com/onnx/onnx/pull/2284>
- Current recurrent operator in ONNX, operate on:
 - [seq_length, batch_size, input_size]
- Most framework support:
 - [seq_length, batch_size, input_size] and [batch_size, seq_length, input_size]
 - Some framework hide the batch axis.

THANKS FOR COMING!!!

Operator SIG resources

- Slack channel: <https://slack.lfai.foundation> and join onnx-operators
- Documents and artifacts:
<https://github.com/onnx/sigs/tree/master/operators>