ONNX Community and Resources

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Outline

- ONNX Community
- Roles
- Organizational Structure
  - Steering Committee (SC)
  - Special Interest Groups (SIGs)
  - Working Groups (WGs)
- Communication and discussions
  - Gitter
  - LFAI

ONNX Community Principles

The ONNX community adheres to the following principles:

- **Open**: ONNX is open source
- **Welcoming and respectful**
- **Transparent and accessible**: Work and collaboration should be done in public.
- **Merit**: Ideas and contributions are accepted according to their technical merit and alignment with project objectives, scope and design principles. Engineering investment >> corporate sponsorship
- **Speed**: Contributing the time and effort to ensure fast decision-making is key to ensuring that the specifications produced is aligned to the fast iteration of machine learning technologies.

Open Governance

- ONNX is rolling out open governance to encourage broader participation beyond the founding companies. This will make the decision making process more transparent, enable better technical decisions with consideration of more viewpoints, and share the work of maintenance.
- ONNX open governance creates 3 roles: Member, Contributor, Approver. 3 structures are also created: Steering Committee, Special Interest Groups (SIGs), Working Groups. Contributors and Approvers can vote for the Steering Committee members. The Steering Committee charters SIGs and appoints SIG chairs. Every piece of ONNX belongs to some SIG. Community members participate in one or more SIGs.
- The effort is bootstrapped with an initial Steering Committee and set of SIGs with the first elections to occur after 1 year.

Repository Guidelines

All repositories under the ONNX github org:

- Must adopt the ONNX Code of Conduct
- All code projects use the MIT license. Documentation repositories must use the Creative Commons License version 4.0.
- Must adopt the ONNX CLA bot
- All OWNERS must be members of standing as defined by ability to vote in ONNX steering committee elections
- Repository must be approved by the Steering Committee

Repositories can be removed when they are inactive by archiving them.

Community Roles

Members

- Members are individuals who are interested in or participate in the ONNX community. Members are able to follow and participate in all public modes of communication used by the ONNX community including but not limited to GitHub, Gitter, Stack Overflow, email announcements and discussion aliases. Members are expected to adhere to the Code of Conduct but do not have any specific responsibilities.

Community Roles

Contributors

- Contributors are Members who are active contributors in the community. They can have issues and PRs assigned to them. They also have voting privileges. Contributors can be active in many ways including but not limited to:
  - Authoring or reviewing PRs on GitHub
  - Filing or commenting on issues on GitHub
  - Contributing to SIG, subproject, or community discussions (e.g. Gitter, meetings, email discussion forums, Stack Overflow, etc)
  - Creator of content, promoting and advocating the ONNX specification
- A Member can become a Contributor by being sponsored by 2 existing Approvers from different companies. Contributors who are not active in the last 12 months will be removed.

Community Roles

Approvers

- Approvers are Contributors who are experienced with some aspect of the project and with general software engineering principles. Approvers are responsible for reviewing contributions for acceptance by considering not just code quality but also holistic impact of the contribution including compatibility, performance, and interactions with other areas.
- Approvers need to be active Contributors for at least 3 months and be sponsored by a SIG chair with no objections from other SIG chairs.

Organizational Structure

The ONNX community is organized in the following manner, with all governance and execution being planned and coordinated as follows:

- **Steering Committee** is made up of a set number of people whose charter it is to define and iterate on the vision, goals, and governance process of the ONNX community.
- **Special Interest Groups** (SIGs) are persistent groups that are responsible for specific parts of the project. SIGs must have open and transparent proceedings. Anyone is welcome to participate. The purpose of a SIG is to develop a set of goals to be achieved over a set period of time, and then to gather input, drive consensus and closure, implement code contributions, and other related activities to achieve the goal.
- **Working Groups** (WGs) are temporary groups that are formed to address issues that cross SIG boundaries. Working groups do not own any code ownership or other long term artifacts. Working groups can report back and act through involved SIGs.

Steering Committee

- Responsibilities: define, evolve, and defend the vision, values, mission, and scope of the project.
- The Steering Committee consists of 5 individuals. No single Member Company may have more than 1 representative. Members serve 1 year terms.
- The starting composition will be individuals from Microsoft, Facebook, Amazon, and 2 other Member Companies, who have been picked by the three founding members based on contributions and experience.
- After the initial term of each Steering Committee representative is completed, their seat will be open for any contributor in the community to be elected into the seat via a community vote.
- The Steering Committee also establishes SIGs and Working Groups.
- Artifacts can be found in the ONNX steering committee repository

Special Interest Groups (SIGs)

- Each SIG is comprised of individuals from multiple companies and organizations, with a common purpose of advancing the project with respect to a specific topic.
- SIGs artifacts can be found in the ONNX SIGs repository.
- Current SIGs:
  - **Architecture & Infra**
    - This SIG is responsible for defining and maintaining the core ONNX format, the build and CI/CD systems for ONNX repositories, publishing release packages for ONNX, the onnx-docker repository, and creating tools to help integrate with and test against the ONNX standard. This SIG is also the defacto owner of files in the main ONNX repository unless explicitly owned by another SIG.

Special Interest Groups (SIGs)

- **Operator Standardization**
  - This SIG is responsible for determining the operators that are part of the ONNX spec (ONNX and ONNX-ML domains), ensuring high quality operator definitions and documentation, establishing criteria for adding new operators, managing ops domains and compliance tiers, and enforcing versioning mechanisms.
- **Converters**
  - This SIG is responsible for developing and maintaining the various converter repositories under ONNX, ensuring high quality model conversion between ONNX and AI frameworks.
- **Model zoo and tutorials**
  - This SIG is responsible for the repositories that provide a comprehensive collection of state of the art ONNX models from a variety of sources and making it easy for users to get started with ONNX and the ecosystem around it.

Working Groups (WGs)

- Working Groups (WGs) are temporary groups formed to address issues that cross SIG boundaries. Working Groups have a have a clear goal measured through specific deliverables and disband after the goal is achieved.
- Working Group artifacts can be found in the working-groups repository.
- Active working groups:
  - **Training**
    - Expand ONNX to support training as well as inference.
  - **Data Pipelines**
    - Define new operators for processing the data that goes in and comes out

Working Groups (WGs)

- Completed working groups:
  - **Control flow and loops**
    - Enable dynamic control structures to enable advanced models for NLP, speech, and video/image processing
    - If, Loop, and Scan operators were added in ONNX 1.3 release.
  - **Quantization**
    - Enhance ONNX to support quantized data types and operators on a variety of runtimes and hardware devices
    - Quantization was added in ONNX 1.5 release.
  - **Foundation**
    - Identify and evaluate non-profit foundation options for the ONNX consortium. Execute on best option.
    - ONNX joined LF AI in November 2019!!

LF AI

- LF AI (Linux Foundation Artificial Intelligence) is an umbrella foundation under the Linux Foundation that supports and sustains open source innovation in AI, ML and DL.
    - Promotion of project, new releases via LF AI blog or press release, and social media channels
    - Priority access to LF AI booth space at various events for demo purposes
- ONNX is a graduate project! https://lfai.foundation/press-release/2019/11/14/lf-ai-welcomes-onnx/
    - Graduation stage, based on contributors, adopters, maturity
    - An “LF AI Graduate Project” signals to the market that the project has reached a high level of technical maturity and readiness for deployment

Communication

The ONNX community has multiple channels for communication.

- Gitter rooms
  - ONNX Lobby (https://gitter.im/onnx/Lobby): all general announcements, comments and questions
  - ONNX Infra SIG (https://gitter.im/onnx/Infra)
  - ONNX Operators SIG (https://gitter.im/onnx/operators)
  - ONNX Converters SIG (https://gitter.im/onnx/converters)
  - ONNX Model Zoo SIG (https://gitter.im/onnx/modelzoo)
  - Training WG (https://gitter.im/onnx/training)
  - Data Pipelines WG (https://gitter.im/onnx/pipelines)

Communication

- LF AI groups (messages, announcements, calendar events)
  - ONNX-Announce (https://lists.lfai.foundation/g/onnx-announce/topics)
  - ONNX-TSC (https://lists.lfai.foundation/g/onnx-tsc/topics)
  - ONNX-SIG-Archinfra (https://lists.lfai.foundation/g/onnx-sig-archinfra/topics)
  - ONNX-SIG-Operators (https://lists.lfai.foundation/g/onnx-sig-operators/topics)
  - ONNX-SIG-Converters (https://lists.lfai.foundation/g/onnx-sig-converters/topics)
  - ONNX-SIG-ModelTutorials (https://lists.lfai.foundation/g/onnx-sig-modelstutorials/topics)
  - ONNX-WG-Training (https://lists.lfai.foundation/g/onnx-wg-training/topics)