UXL

Unified Acceleration Foundation

www.uxlfoundation.org

UXL
Unified Acceleration Foundation

Open Source WG Priorities

- Build & Infrastructure
- Open Source Best Practice
- Multi-Vendor Targets
- Open Source Kernels
- Architecture
- Compatibility Tests

UXL
Unified Acceleration Foundation

Build and Infrastructure

- Independent builds of the projects in the open source repository
- Continuous integration systems in place
- Community infrastructure for building and testing projects

- https://validation.linaro.org/

UXL
Unified Acceleration Foundation

Open Source Best Practice

- Follow some of the templates for encouraging contributors from CNCF
  - Clear list of maintainers and reviewers
  - Clear process for becoming a maintainer or reviewer
  - Contributor guidelines
  - Clear ways to contribute
- Training for existing project maintainers and contributors
- Project Roadmap
- Open discussions on architectural changes and features

UXL
Unified Acceleration Foundation

Multi-Vendor Targets

- Add and extend functionality for more vendor targets

- Ongoing collaboration with Fujitsu and oneDAL project
- Look to kick off more activities

UXL
Unified Acceleration Foundation

Open Source Kernels

- Integrate or implement open source kernels for the projects
  - For example oneMKL and oneDNN
    - portBLAS, portDNN, portFFT, …
    - Other community and member contributions
- Assist with upstream activities for DPC++ compiler in LLVM
  - Review of code
  - Feedback to RFC

UXL
Unified Acceleration Foundation

Architecture

Does the architecture of the projects make sense?

Are any changes needed to

- Make the project simpler
- Make life easier for developers
- Make integration with other frameworks and software easier

Do the library architectures and functionality fit with common languages and frameworks

- Integration with AI frameworks like PyTorch and Tensorflow and inference engines
- Analysing gaps from community requirements

UXL
Unified Acceleration Foundation

Compatibility Tests

Developers need to be able to rely on compatibility of the APIs across vendor targets

- Define test criteria for library compatibility
- Implement and integrate tests for compatibility testing