Available Aurora Programming Models

- Aurora applications may use:
  - DPC++/SYCL
  - OpenMP
  - Kokkos
  - Raja
  - OpenCL

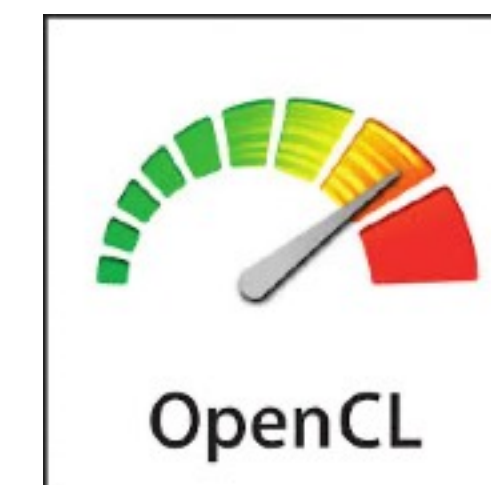- Experimental
  - HIP

- Not available on Aurora:
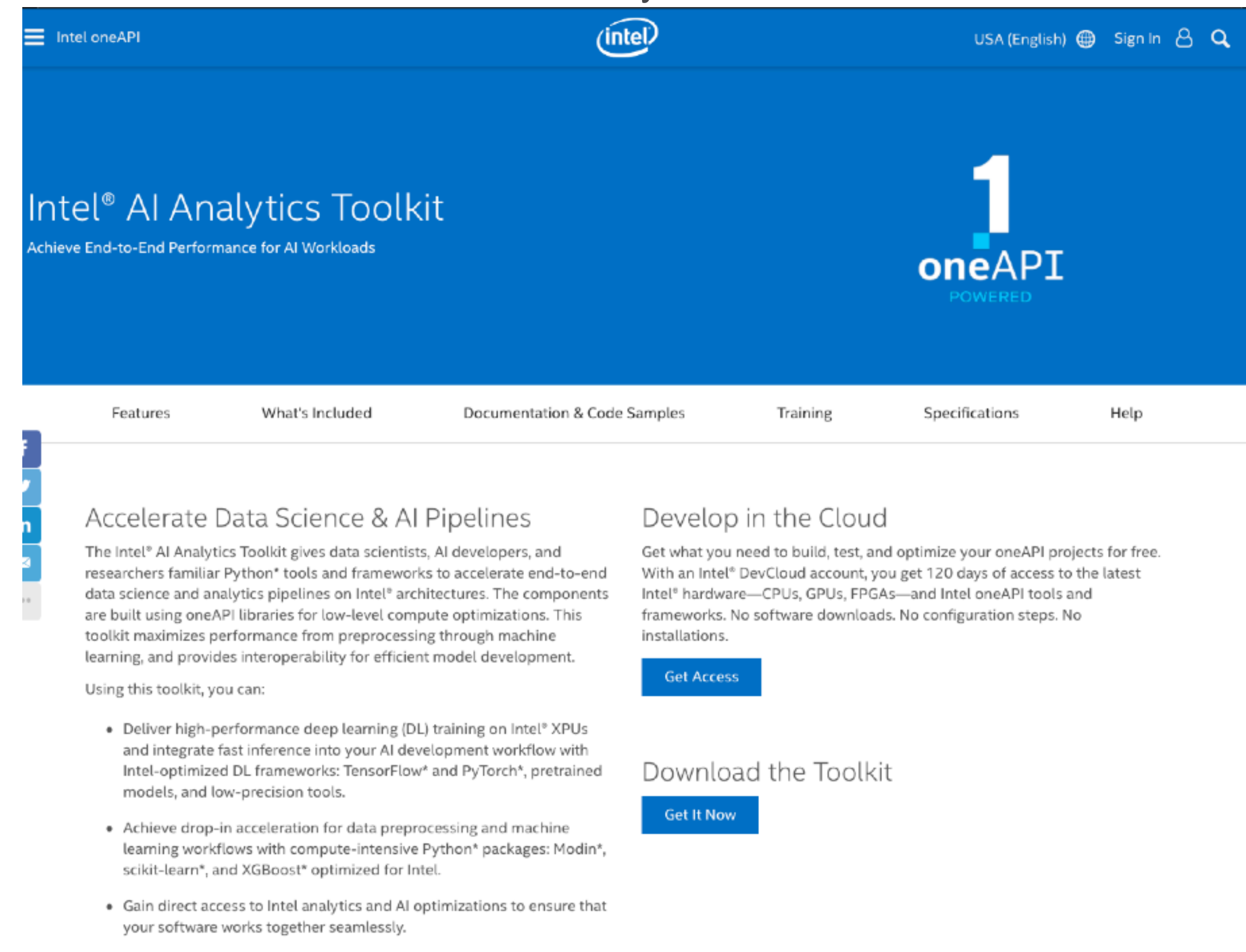 - ~~CUDA~~
  - ~~OpenACC~~

Data Science and Learning on Aurora

Aurora Will Provide for a Familiar, Productive and Performant HPC and AI Software Stack

- Python Ecosystem:
  - Numba, NumPy, etc.
- **ML + Deep Learning Frameworks**:
  - OneDAL, scikit-learn, XGBoost, etc.
  - [PyTorch](), [TensorFlow](), [Horovod](), [DDP](), [DeepSpeed](), 🤗 [Accelerate]()
- *Optimized + scalable communication* with OneCCL
- Spark BigData Analytics
- DAOS for fast I/O + workflows
- Profiling and debugging tools

Intel AI Analytics Toolkit

https://software.intel.com/content/www/us/en/develop/tools/oneapi/ai-analytics-toolkit.html