Contribution ID: **223**   Type: **Workshop/BoF proposal**

Optimized Artificial Intelligence Solutions by Intel

Thursday, 6 December 2018 15:30 (1h 30m)

Description:
Join us for one day of hands-on sessions on Artificial Intelligence, and Machine & Deep Learning. Experience a unique opportunity to test out the latest performance optimized frameworks and tools, advanced coding knowledge and best practices to get started implementing AI guided by experts from Intel®.

Target Audience:
Data Scientist, application developers and HPC benchmarkers targeting the deep learning and machine learning domain.

Prerequisites:
Beginning to intermediate level of domain AI knowledge.
Basic skills of programming , ideally some Python knowldege

Type of tutorial: Mix of lectures and hands-on tutorials

Special Requirements:
Attendees should bring their laptop with an SSH- & VNC client
Attendees will get for hands on-labs also access to the CHPC cluster

Outline of full syllabus:
08:00 Registration
09:00 Introduction
• Introduction round & Agenda
• Introduction Intel Software Developer Tools
• Introduction to Machine Learning / Deep Learning
10:30 Morning Refreshment Break
11:00
Classic Machine Learning Tools
• Intel performance Libraries - MKL & DAAL
• Intel Distribution for Python (IDP) Introduction
• IDP Hands on labs
o NumPy & MKL
o K-Means Clustering & DAAL
o SVM & DAAL
12:30 Lunch
13:30
Deep Learning (DL) Tools
• Intel performance Libraries for DL – MKL-DNN & MLSL
• Intel optimized Frameworks / TensorFlow
o TensorFlow Image Classification Hands-on Lab
o Introduction simple CNN
o Monitored Training Session
15:00 Afternoon Refreshment Break
15:30
Deep Learning Tools (cont'd)

- Intel optimized Frameworks / TensorFlow (cnt'd)
  o Horovod – distributed classification
  o Importing external Images
  o Custom batches
- Benchmarking distributed TensorFlow (BKMs)
- Deep Learning Scaling – large scale results (BigDL/Spark)
- Wrap-Up & Q&A
17:00 End of Day

Presenter Biography

Primary authors: STEYER, Michael; PREISS, Edmund (Intel)

Presenters: STEYER, Michael; PREISS, Edmund (Intel)

Session Classification: Optimized Artificial Intelligence Solutions by Intel