⊞ National Center Of Data Analytics And Cloud Computing

Exascale Open Data Analytics Lab

Exascale OpenLab is a unique public private partnership concept which will provide framework through which NEDUET can collaborate with leading ICT companies and national and international academia to accelerate the development and deployment of the cutting edge ICT solutions related to big data and its analytics on cloud using Open source platforms.

The idea is to establish a platform for open collaboration first of its kind in Pakistan. Two of the labs successfully operating on the similar concept are CERN OpenLab and Huawei OpenLab. Focusing towards both academia and industry to meetup on a single point and adopt the fast growing machine learning and data analytics techniques in no time. Such platform has the potential to increase the reproducibly of experiments by linking publications, software, data and workflows with validated identifiers from reputable and tested community maintained repertoires. This new data /computing platform common across research communities working on Data Analytics could provide many advantages:

- Promotion of the theoretical and applied data sciences in academic and industry
- Contribution of knowledge w.r.t social and economic relevance in Pakistan's perspective
- Related training at all levels for production of necessary Human Resource
- A general entry point for access to data analysis and machine learning tool for both computing and non-computer background scientists.
- Channels for sharing information and best practices in the selected domains
- Development, testing and debugging of new data analytics software, libraries, tools and applications in selected domains
- Introducing and Enhancing open collaboration in cross disciplinary research domain

A Lab like this provides excellent opportunities for inter-disciplinary collaborations including national and international partnerships. The overall mission of the lab is to bring cutting-edge exascale open source data analytics research to the Pakistan. Mentor and provide platform to all national students, scientists industry from all domain of sciences and engineering, finance, economic and finance, environment, medical to solve their related data analytics problems.

Through this project we will also be able to build the lab infrastructure as well as skilled manpower in the selected domain applications in connection with exascale software development that will enable us to span out Pakistan's footprints on international open source canvas.

RESOURCES (/Resources)

RESEARCH (/Research)

SERVICES & SUPPORT (/Services)

TECHNOLOGIES IN FOCUS

Computing Resources

The centre is equipped with all basic parallel computing platforms / architectures including Shared Memory (SMP), Multicores, Distributed Memory (Cluster), GPGPUs and Cloud Infrastructure. The centre has 10 TFLOPS of computational power consisting of Intel Xeon 3xxx and 5xxx series, AMD Opteron and Nvidia / AMD Radeon GPGPU cards.

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(/Resources)

Training and Consultancy

Training and consultancy services are available at the centre with a vision to promote the human capital and IT infrastructure with effective training, development and management process. Highly customized and flexible training and consulting sessions can be arranged for individuals and groups either on-site or on-line.

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(/Services)

This center also aims to promote the Multi-disciplinarily, Inter-disciplinary, Trans-disciplinary, and / or Cross-disciplinarily Research involving nearly all the engineering and applied sciences domain. Full support and supervision is available to parallelize the serial codes and execution of related simulations on a high performance environment.

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(/Research)