HIGH PERFORMANCE COMPUTING (HPC) NODE AT USIU-AFRICA

Catalyzing research and innovation in Africa

Hope alive

Almost involuntarily, every second Africa produces terabytes over terabytes of data. The power to harness this data to innovative African solutions is the next frontier. The narrative of data erosion from villages and urban centers is quickly fading away!

Big data is just about to deliver solutions to the multiplicity of challenges in Africa. Unemployment, insecurity, terrorism, radicalization, gender disparity, environment degradation, climate change, tropical diseases and health challenges will be solved through research and innovation powered by HPC in Africa.

The opportunity

USIU-Africa wants to build capacity, provide skills and infrastructure to harness data with the aim of getting deeper insights of local problems, in ways that have not been previously possible. Subsequent steps will involve commodification of solutions, offering them for sale on an e-commerce platform.

With the HPC framework built, a network of scientist across Africa and globally will integrate research in big data, HPC, energy, environment, climate change and other cross-cutting fields to develop innovative solutions.

The Consortium

The Carnegie Africa Diaspora Fellowship Program (CADFP), Intel and USIU-Africa formed the High Performance Computing Consortium-Africa (HPC2-Africa) to champion development and harnessing of HPC and its benefits in the African continent. In December, 2017, the consortium hosted a conference where stakeholders shared their need for establishing HPCs across Africa.

Sector-based Impact

i   Food security: Accurate weather predictions will inform long term food security policies, environmental policies and interventions and even security policies.

ii.   Grow of industry and SMEs: Retail, manufacturing and financial services will benefit from HPCs power in data analysis for insights and innovation.

iii.   Economic research: Economic modeling using big and open data will lead to insights and contribute to evidence-based policymaking.

iv.   Increase research collaboration: African scientists will contribute to the global research agenda.

v.   **Health and life sciences:** Epidemic modeling will help predict disease spread so that governments and healthcare providers can make appropriate interventions.

Our invitation:

We invite you to partner with USIU-Africa to establish a High Performance Computing (HPC). This will entail:

i.   Development of a 6,000 m^2, 4-storey eco-building at an estimated cost of **USD 1,200,000** with a naming opportunity.

ii.   Installation of a water cooled HPC cluster of 40 Teraflops (Tflops) processing capability, and 1 petabyte storage capacity estimated at **USD 800, 000/-.**

iii.   Acquisition of industrial type computers, with displays and input devices; networking devices, Solar Photovoltaic panels and batteries for the 10 projects estimated at **USD 110,000.**

Contacts
For partnership enquiries please contact:

Prof. Paul T. Zeleza, Vice Chancellor, pzeleza@usiu.ac.ke or +254 730 116 411

Mr. James Ogolla, Director, University Advancement, ogollaj@usiu.ac.ke or +254 730 116 409

USIU AFRICA
United States International University-Africa