# CHPC
### CENTRE FOR HIGH
### PERFORMANCE COMPUTING

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# AI is impacting HPC everywhere

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The convergence of AI and HPC has created a fertile venue that is ripe for imaginative researchers - versed in AI technology - to make a big impact in a variety of scientific fields. From new hardware to new computational approaches, the true impact of deep- and machine learning on HPC is, in a word, "everywhere".

Just as technology changes in the personal computer market brought about a revolution in the design and implementation of the systems and algorithms used in high performance computing (HPC), so are recent technology changes in machine learning bringing about an AI revolution in the HPC community. Expect new HPC analytic techniques including the use of GANs (Generative Adversarial Networks) in physics based modeling and simulation as well as reduced precision math libraries such as NLAFET and HiCMA to revolutionize many fields of research. Other benefits of the convergence of AI and HPC include the physical instantiation of data flow architectures in FPGAs and ASICs plus the development of powerful data analytic services.

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