A New Era of Discovery

HPC is a fundamental pillar of modern science—from predicting weather to finding new energy sources, researchers use large computing systems to simulate and predict our world.

AI extends traditional HPC by letting researchers analyze massive amounts of data faster and more effectively. It’s a transformational new tool for gaining insights where simulation alone cannot fully predict the real world.

Historic Changes in HPC

The increasing need to find useful insight in tremendous amounts of data is creating new challenges—and new opportunities in solving the world’s greatest challenges.

AI and Data Science

AI and data science are emerging as important new components of scientific discovery.

Dramatic improvements in accuracy and response time with deep learning are unprecedented insight from huge volumes of data.

End of Dennard Scaling

Dennard Scaling has reached its limit, capping single-threaded performance.

Moving forward, increasing application performance will require fine-grain parallel code with tremendous computation that only GPUs can deliver.

A New Usage Model

Researchers are turning to in-situ execution and visualization to enhance their processes and productivity.

This new capability is being driven by tight coupling of interactive simulation, visualization, and AI data analytics.

Potential Exascale Advancements

A Unified AI Supercomputing Architecture

By pairing NVIDIA® GPUs with Tensor cores, NVIDIA V100 gives you the ideal hardware for building your next high-performance, AI-enabled supercomputer.

Drive New Breakthroughs with AI Supercomputing

Find out more about how AI solutions like the NVIDIA Tesla V100 are transforming HPC.

www.nvidia.com/v100