BioSpectrum
the business of Bio & Health Sciences
ASIA EDITION

New-Zealand installs the world's most advanced AI supercomputer

April 19, 2021 | News

Advanced Machine learning and artificial intelligence accelerates the R&D and data processing across all arena, including healthcare



New Zealand's most powerful supercomputer for artificial intelligence applications has been installed at the University of Waikato as part of its commitment positioning New Zealand as a world leader in AI research and development.

The NVIDIA DGX A100 is the first computer of its kind in New Zealand and is the world's most advanced system for powering universal AI workloads. The machine can rapidly and efficiently process massive amounts of data, allowing students and researchers at the University to process at lightning-fast speeds, enabling machine learning and artificial intelligence that can solve problems from addressing climate change to managing biodiversity.

Professor Albert Bifet says that students and researchers could take months, or even years, to process the data needed to create models like the one they are working on if they had to use more traditional computing: "This computer will allow our researchers to process that data in a matter of days. It will enable them to gain insights and progress their research at an unprecedented scale."

The system was supplied by Fujitsu. The NVIDIA A100 Tensor Core GPUs featured in the DGX A100 system is designed specifically to accelerate the unique needs of AI workloads, while NVIDIA Mellanox InfiniBand networking ensures that data is rapidly supplied to the system.

The A100 GPUs enable data scientists and developers to perform a massive number of calculations all at once, a key feature of the algorithms behind machine learning and artificial intelligence. The DGX A100 has eight A100 GPUs containing 40 GB of memory each for a total of 320 GB of GPU memory. When they all work together, they can process five quadrillion basic arithmetic operations per second.

"AI is a powerful tool that enables researchers to achieve scientific breakthroughs and discoveries on areas such as climate change and biodiversity, which are critically important to New Zealand and the world," said Sudarshan Ramachandran, country manager, NVIDIA.