

How Will the UAE's Supercomputer Be Used?

The Mohamed bin Zayed University of Artificial Intelligence (MBZUAI) in Abu Dhabi is set to house a new supercomputer developed by Hewlett Packard Enterprise (HPE), which will help to further its capabilities in data analysis, machine learning and AI. Those disciplines are expected to form essential components of research and development in a wide variety of industries going forwards.

That includes expanding our knowledge and improving our abilities in the field of healthcare, including finding vaccines for new pandemics more efficiently and rapidly, as well as addressing global issues such as food and water security, pollution and sustainability. As such, the MBZUAI supercomputer is expected to have a huge impact on the institution's operations in the future.

The power of data

AI functions by analysing vast amounts of data and spotting patterns which are not apparent to the human eye, then extrapolating that information to gain actionable insights. Of course, it takes a large amount of computing power to achieve those outcomes, especially when deployed at scale. That's where the HPE supercomputer comes in.

As the latest addition to MBZUAI's Campus Super Computing Centre (CSCC), the machine will allow researchers and data scientists the opportunity to assess more information more efficiently than ever before. This is expected to have knock-on effects for fields as disparate as law enforcement, structural engineering and sustainability.

The UAE as innovator

The acquisition of the superpower only adds to the UAE's credentials as a regional and global leader in technology and innovation. Although MBZUAI only opened its doors as recently as 2021, it has already achieved 24th place on a global list of research centres specifically dedicated to the discipline of AI.

Two areas into which the university has already poured substantial investment and in which it has achieved impressive results are DNA sequencing and disease prevention. The Emirati Genome Programme employs AI to identify, isolate and analyse large amounts of data pertaining to DNA sequencing, while the Abu Dhabi Health Services Company (SEHA) is leveraging AI in its predictive algorithms, capable of predicting heart attacks and other coronary issues.

Top of the range

The supercomputer is just the latest in a lengthy list of collaborations between HPE and the UAE, with company's regional managing director Ahmad Alkhallafi underscoring its work in the country. "HPE has a longstanding commitment to advancing the way people live and work in the United Arab Emirates, through our Emiratisation program, Digital Life Garage, and industry and government partnerships," [he said](#).

The supercomputer has been purpose-built to handle AI and analytical pursuits and is based upon the Apollo 6500 Gen10 Plus model. It will utilise 2nd Gen AMD EPYC™ processors, alongside 384 and 384 NVIDIA A100 Tensor Core GPUs. Meanwhile, the storage capabilities are equally impressive, with the supercomputer boasting four petabytes of memory.