PURESTORAGE®
Uncomplicate Data Storage, Forever

長庚醫療財團法人
Chang Gung Medical Foundation

About Customer

As the largest medical center in Taiwan, Chang Gung Memorial Hospital (CGMH) offers professional medical services and holistic health care. The Center for Artifcial Intelligence (AI) in Medicine was founded by CGMH in May 2018 to strengthen clinical applications of AI and deep learning.
www.cgmh.org.tw

Geo

Asia Pacific, Japan

Industry

Healthcare

Solution Area

Power Artifical Intelligence

Pure Storage® Products in Use

FlashBlade®
AIRI®

Center for AI in Medicine of Chang Gung increases efficiency with Pure Storage

As the largest medical center in Taiwan, Chang Gung Memorial Hospital (CGMH) has been devoted to offering professional medical services and has contributed to the advancement of medical care and research in Taiwan. With AI being increasingly applied to medicine, CGMH established the Center for Artificial Intelligence in Medicine in 2018, building on its massive collection of clinical and medical data as well as long-standing digitization. Under the leadership of Director Chang-Fu Kuo, the center's mission was to strengthen the clinical applications of AI and deep learning and improve the quality of medical services and doctor-patient relationships.

To speed up medical data analysis and medical research, the Center for AI in Medicine brought in Pure Storage to help improve performance and accelerate data computing.

> "Pure Storage's technologies offer speed, stability, and security. Speed—the computing speed of analyzing medical data has been greatly increased after introducing AIRI. Stability—AIRI supports massive data computing with great stability. Security—we've had no data security concerns with the system."
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> **CHANG-FU KUO,**
> DIRECTOR OF CENTER FOR ARTIFICIAL INTELLIGENCE IN MEDICINE, CHANG GUNG MEMORIAL HOSPITAL

Impact on Chang Gung

Improve the efficiency of medical research and support multiple projects simultaneously

Accelerate extensive medical image analysis and genetic research

Support secure and efficient system integration and computing

Challenges

Extensive medical imaging data requires high-speed data computing, access

Medical data have extremely stringent requirements for system security and stability

Growing demands for the Center for AI in Medicine

Results

Learning time has been reduced from 7 days to 1 day, increasing computing efficiency by 7 times

Over 3:1 data reduction ratio for massive unstructured data

Single storage platform supports the computing power of over 10 AI servers

Overcoming the challenges of AI and deep learning

As medical data and projects ramped up quickly, the center realized that they needed a more stable infrastructure in order to cope with the increased workloads. Medical data is massive and requires precision, so maintaining the original size of the data while ensuring data integrity was critical.

Demanding high storage performance, security, and stability, the Center for AI in Medicine installed Pure Storage FlashBlade and AIRI into its infrastructure.

AIRI supports projects with high performance, stability, and security

Pure Storage AIRI enabled lightning-fast computing and analysis to the center's medical and genetic research projects. Since the introduction of FlashBlade as its computing infrastructure it has delivered over 3:1 data reduction ratios. System learning time has been shortened from 7 days to 1 day, increasing computing efficiency by 7 times. In addition, the single storage platform supports the computing power of over 10 AI servers. Furthermore, data transfer time has been greatly reduced, cutting GPU idle time and optimizing computing process and efficiency.

Besides ultra-high-performance computing, the Pure Storage systems provided great stability, ensuring uninterrupted service and no system downtime under all circumstances. The storage infrastructure from Pure Storage is also highly secure, meeting the stringent demands for confidential data transfers and privacy protection in the medical world.

The high-performance storage system from Pure Storage helps the Center for AI in Medicine, CGMH, to collect, consolidate, and analyze massive data, accelerate data computing, and improve data reduction ratios. The high stability of Pure Storage also enables CGMH to have a more secure and efficient system integration and computing.

AI in clinical applications catalyzes medical breakthroughs

The Center for AI in Medicine, CGMH, believes that medical services are human-centric, and that all AI applications in medicine should build on good doctor-patient relationships. With the support from Pure Storage, the center will keep improving data security, stability, and computing speed to accelerate AI applications in medicine, catalyze more medical breakthroughs in Taiwan, and enhance doctor-patient relationships.

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