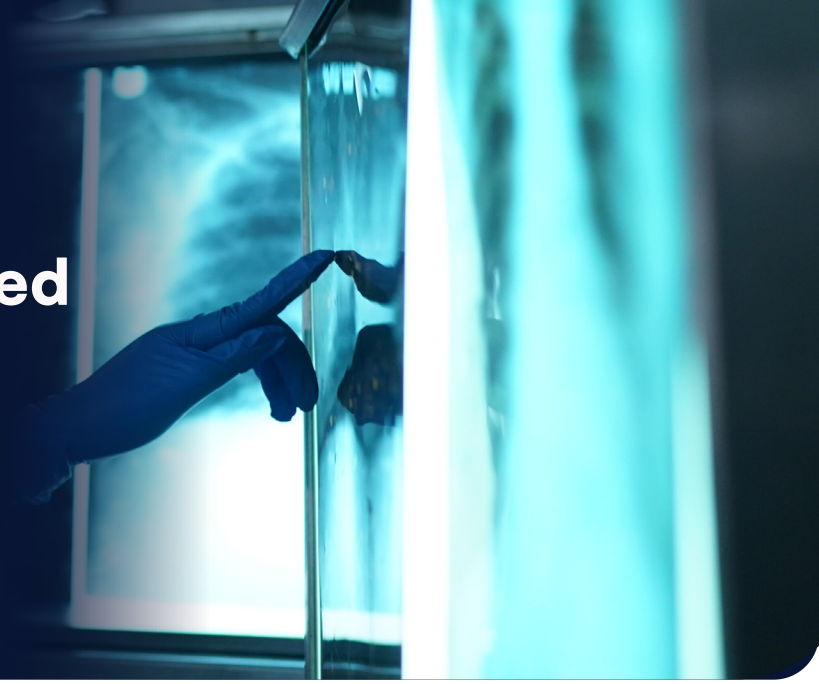
Success Story

Pioneering AI-Powered Cancer Diagnostics with VAST Data



Lunit, a leading medical AI company founded in 2013, aims to revolutionize cancer diagnosis and treatment through cutting-edge deep learning technology. Committed to providing accurate and personalized care for each cancer patient, Lunit has developed two groundbreaking AI solutions: Lunit INSIGHT for medical image analysis and Lunit SCOPE for cancer therapeutics.

Lunit INSIGHT, a suite of AI-powered diagnostic tools, assists radiologists by precisely analyzing medical images such as chest X-rays and mammograms. This technology has significantly improved the early detection of lung and breast cancer, enhancing diagnostic accuracy and workflow efficiency. Having received United States Food and Drug Administration (FDA) clearance and the European Union CE Certification (CE Mark), Lunit INSIGHT is now clinically used in over 3,000 hospitals and medical institutions across more than 40 countries.

Lunit SCOPE, an AI-driven platform for cancer therapeutics, supports pathologists in analyzing tissue samples and tumor microenvironments. By enhancing the precision of cancer diagnosis and predicting patient responses to immunotherapy, Lunit SCOPE enables personalized treatment plans and improved patient outcomes.

Real-World AI Medical Applications

What sets Lunit apart is the unprecedented accuracy (95-96%) of their AI solutions, ensuring high reliability and efficiency in medical image analysis and cancer diagnosis. This technology is continuously updated and validated through extensive clinical trials and real-world applications. A prime example of Lunit's impact is the world's first AI solution applied as the primary evaluator for breast cancer screening at Capio Saint Göran Hospital in Sweden. This groundbreaking implementation at Sweden's largest private hospital addresses Europe's ongoing radiologist shortage and enhances the efficiency and accuracy of cancer screening.

Lunit's AI solutions have undergone rigorous testing and received numerous regulatory approvals from foremost health authorities worldwide, including the United States Food and Drug Administration (FDA) and is CE certified by the European Economic Area (EEA). As a medical AI company grounded in clinical evidence, Lunit's findings are presented in major peer-reviewed journals and global conferences, ensuring their products meet the highest safety and efficacy standards.

3,000 hospitals and medical institutions across more than 40 countries are now clinically using Lunit INSIGHT

Enhanced AI workloads ensuring quicker data processing and analysis essential for Lunit's innovative cancer research.

Lunit has established strong partnerships with leading healthcare institutions and industry leaders globally, such as GE Healthcare, Philips, FujiFilm, NHS Trust, Volpara Health Technologies, and Guardant Health, to support its mission. These collaborations enable Lunit to improve its solutions continuously and stay at the forefront of the fight against cancer.

Transition to the VAST Data Platform

Before adopting the VAST Data Platform, Lunit faced significant challenges with slow random read performance. Their previous data platform experienced severe bottlenecks when reaching 100 IOPS, negatively impacting their GPU server clusters. Managing this outdated system was time-consuming, and frequent disk failures disrupted both stability and performance.

The VAST Data Platform, with its robust and scalable architecture, addressed these issues. Enterprise-grade features such as n+4 drive protection, fail-in-place architecture, snapshots, and encryption minimized data management time. Additionally, VAST's zero-trust data security and compliance capabilities ensured that Lunit's rapidly increasing data remained secure and manageable, allowing them to scale to meet growing demands.

95-96% accuracy of Lunit AI solutions, ensuring high reliability and efficiency in medical image analysis and cancer diagnosis.

Lunit's decision to switch to VAST stemmed from several critical advantages that addressed their previous challenges and significantly enhanced their operational efficiency. With VAST, Lunit achieved a data reduction rate of 2.5 to 1, effectively reducing storage requirements by 60%. This capability, combined with VAST's faster performance, allowed Lunit to enhance their AI workloads, ensuring quicker data processing and analysis essential for their innovative cancer research.

Advanced Infrastructure

Today, Lunit's infrastructure mainly consists of an integration of NVIDIA, Amazon Web Services (AWS), Google Cloud Platform (GCP), and VAST Data. The company's VAST deployment is a single cluster located in the Republic of Korea, with a capacity of 1.3 PB. Machine learning of medical images is performed by reading data from VAST and sending it to 56 deep learning servers, which primarily consist of NVIDIA HGX™ H100, NVIDIA HGX A100, and other NVIDIA GPUs.

With VAST, Lunit can now focus more on their core mission of fighting cancer with cutting-edge AI technology.

About VAST

VAST Data is the data platform software company for the AI era. Accelerating time-to-insight for workload-intensive applications, the VAST Data Platform delivers scalable performance, radically simple data management and enhanced productivity. Launched in 2019, VAST is the fastest-growing data infrastructure company in history.

Looking to simplify your data center and unlock insights from all of your data? **Contact us at hello@vastdata.com**

Scan Here learn more about how VAST and Lunit are accelerating and streamlining modern analytics at enterprise scale.

©2024 VAST Data, Inc. All rights reserved. All trademarks belong to their respective owners.
07/2024