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ASIA EDITION

# Intel Showcases Impressive AI Technology for Healthcare with its collaborative partners at Healthcare+ EXPO 2023

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**In recent years, several tech giants, including Intel, have unveiled the outcomes of their extensive research and development in AI technology. After years of dedicated work, they are now showcasing numerous potentials and positive impacts that this technology can offer to humanity.**

Apart from the generative AI which many of us are using nowadays to assist many of our daily tasks, there are also other AI technologies which are currently used by medical professionals to improve the healthcare system we have today. We recently visited Intel's booth at Healthcare+ EXPO 2023 this year and was given a quick glimpse into many impressive yet practical implementation of the latest AI Technology by Intel and many of its partners to deliver better healthcare services to the public.

At the first section of the booth, we can see Onyx is using the latest A770 GPU from Intel, which are specialized for tasks like 3D rendering, AI, and Visualization, enhancing the capabilities of medical devices. Among the facilities that is on display, here are some of those that really caught our attention:

An ambulance network system which facilitates real-time sharing of patient data with doctors, enabling them to receive crucial information as soon as the patient arrives, particularly in emergency situations like accidents. Additionally, it provides recommendations for the nearest hospital best suited to address the patient's specific condition.

A telemedicine system families and patients can receive support from doctors and hospitals through this platform. It also serves as a global hub for healthcare professionals to share information and engage in discussions. This enables them to better understand the patient's health condition and provide the suitable treatment or medications without having to be there in physical.

A surgical AI Imaging which according to Onyx, can swiftly detects brain conditions from CT scans and MRIs results within 30 seconds, a significant improvement over the traditional process that typically takes several hours with human analysis. With FDA approval and an impressive accuracy rate of up to 95%, it represents a groundbreaking advancement in medical imaging.

Meanwhile at Acer Medical, its flagship product AI PC which utilises Intel's cutting-edge Core products, especially designed for enterprise environments like Medical Offices terminals are put on display. According to Acer, its AI PC runs

on finless cooling solutions and requires very minimal maintenance, allowing the product to last up to 10 years long.

Everfortune AI that utilizes OpenVino to process ECG data can also be easily deployed on the Acer AI PC and doctors observes a greatly improved performance when tasks are executed on the Acer AI PC. Acer Medical AI products that focuses on health screening solutions such as Verisee DR, Verisee AMD, VeriOsteo OP, VeriCAD, and VeriNPI are the plethora of AI powered solutions that can be fit into one single system, saving spaces and cost while making these advanced solutions more accessible for those who are in needs.

Wellgen, a key player in Cytology AI, software services, and education, is also collaborating with partners like Acer Medical to make cytology AI widely accessible using Acer AI PC. Powered by Intel OpenVino and OpenFederated Learning, this technology allows researchers, pathologists, and students to conduct pathology viewing and receive AI assistance at the edge. Working closely with Acer Medical, Wellgen aims to expand cytology collaboration, leveraging their extensive database of over 100,000 cytology samples for education and research purposes.

The integration of OpenVino and OpenFL modules enhances AI efficiency and secure collaboration for both AI inferencing and training. Through the partnership with Intel, there has been a significant improvement in AI training cost-effectiveness and inferencing results, enabling the widespread scaling of cytology AI in a cost-effective manner.

We were also introduced to a rather interesting collaboration between Far EasTone Telecommunication and Intel to establish a 5G Sister Laboratory. This partnership extends to the Intel Rise Technology Initiative, where they deploy AI in Far Eastern Memorial Hospital to detect laryngeal cancer. The software infrastructure is hosted in the Far Eastern 5G Cloud, utilizing Intel’s Open Federated Learning framework from the Linux Foundation. Intel’s 4th Gen Xeon with AMX trains the Laryngeal AI model, allowing local training on standard Intel Servers in adherence to hospital data policies.

This secure AI model sharing is enabled through confidential computing with Intel SGX. Far East Tone emphasizes Intel’s commitment to scaling AI everywhere for healthcare advancements. In a related context, healthcare is evolving beyond hospital boundaries, discussed during a Medtex Keynote where Far Eastern Memorial Hospital employs AI, including Laryngeal Cancer AI, in collaboration with US-based hospitals like Vanderbilt University.

The hospital uses Intel Xeon 4th Gen for efficient training, ensuring secure and confidential AI training between hospitals through Intel Open Federated Learning with Intel SGX.