origin integrated studios

the healthcare digital future

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RECENT DEPLOYMENTS

Northern Heart Hospital Penang

Penang and North Malaysia's foremost hospital specializing in cardiac and vascular health, providing a comprehensive range of diagnostic facilities and services for cardiac, vascular, and cardiothoracic conditions. Strive for improved heart health outcomes at NHH.

Picaso Hospital (PJ)

At Picaso, abbreviated from PJ Integrated Centre of Advanced Surgery and Oncology, stands as leaders in surgical procedures and cancer care across Malaysia, dedicated to ensuring every patient receives personalized medical attention and optimal solutions for their recovery. At its core, it aims to inspire hope in patients, helping them regain normalcy with the aid of cutting-edge facilities like robotic operating theaters and maintenance therapy centers, supported by a team of expert specialists and medical professionals.

Regency Medical Care Centre (RMCC)

RMCC, a part of Regency Medical Centre Hospital, strategically situated at The Mall, Mid Valley Southkey Johor Bahru (Ground Floor, North Entrance), offering various health screening packages. It provides convenient and trusted healthcare services for residents in the surrounding area.

APHM 2024

4 - 6 JUNE 2024
KL CONVENTION CENTRE

APHM 2024

4 - 6 JUNE 2024
KL CONVENTION CENTRE

Thank you so much to everyone who stopped by our booth!
We're sorry we couldn't include everyone in the newsletter.
For more photos, check out our website.

UPCOMING RELEASES

ORIGIN SYNC (PATIENT APP)

ORIGIN QUEUE MANAGEMENT SYSTEM (QMS) MODULE

After investing months of effort into its creation, we're thrilled to announce the launch of our Origin Sync (Patient App) & Origin Queue Management System (QMS)!

Origin Sync is an all-in-one patient application that enables patients to instantly monitor and access their medical health records after consultation. Additionally, it supports users to make online appointment bookings or choose to walk-in for their consultations. Origin Sync has features like allowing users to add dependents to their profiles, all tailored to hospital configurations.

Origin QMS plays a vital role in coordinating appointments with doctors and services. By combining both Origin Sync and Origin QMS, patients can easily book their appointments online with Origin Sync or use user-friendly kiosks when they arrive, ensuring a smooth start to their visit. The system makes sure urgent cases are seen promptly and smoothly schedules regular appointments to keep everything running smoothly.

With the ability for patients to queue via the Origin Sync and confirm their locations by scanning QR codes in each hospital division, medical practitioners can monitor their whereabouts. Notifications will alert patients on their phones when it's their turn, prompting them to be prepared at the designated location. When patients arrive, they will find clear digital signage pointing them to the right place, whether it's for a radiology test or picking up prescriptions at the pharmacy. Real-time updates keep patients informed about their wait times, so they always know what to expect and can relax a bit more.
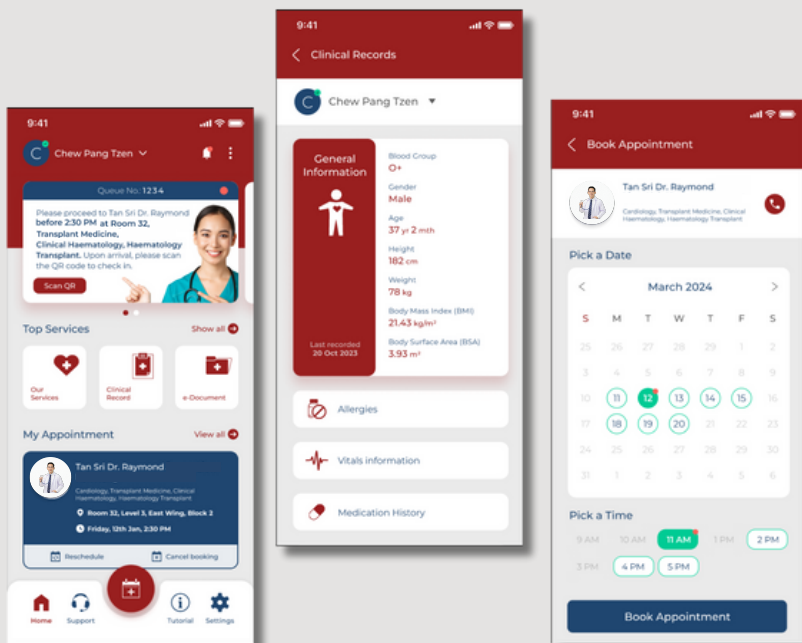
Apart from that, our Origin QMS provides designated video display areas that enable the hospital to share health tips, updates, and helpful advertisements, benefiting both patients and visitors. This contributes to improved operational efficiency and enhances the overall experience by ensuring everyone remains informed and engaged during their hospital visit.

But what really matters is that our Origin QMS works seamlessly with Origin Sync, Origin HIS and EMR, making sure all the data stays connected throughout the entire data flow processes.

Say no more to missing data!

	Dr Nicholas Chua			11:02 am

Dr Nicholas Chua
Consultant Cardiologist
11:02 am
Tue 26 Mar 24

A & E Room 1 • **Now Serving** AS0156 AS0154 AS0153 AS0152

Appointments

Time	Queue	Status
9:00	AS0153	Completed
9:30	-	Available
10:00	AS0154	Called
10:30	-	Available
11:00	AS0155	Pending
11:30	AS0156	Called
12:00	-	Available
12:30	-	Available

NEW
SUPPORT YOUR CHILD'S
8 IMPORTANT DEVELOPMENTS
Anmum

ENJOY UP TO
35% OFF
EXCLUSIVE HEALTH SCREENING PACKAGES

Walk Ins

Queue	Status
AS0153	Completed
-	Available
AS0154	Called
-	Available
AS0155	Pending
AS0156	Called

Origin Medical Centre

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Clinic Tan & Tan
11:02 am
Tue 26 Mar 24

Counter 6
AS0152

Counter	Queue
4	AS0150
3	AS0149
5	AS0148
7	AS0147
1	AS0145

Origin Medical Centre
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FOR ADDITIONAL INFORMATION, FEEL FREE TO REACH OUT TO US:

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AI FOR MEDICAL IMAGING AND DIAGNOSIS

By Brendan Kong Sien Howe

Artificial intelligence (AI) technologies are transforming the medical field, particularly in diagnosing and predicting a variety of diseases and disorders. Leveraging learning algorithms and vast amounts of data from medical records or wearable technology, AI is enhancing disease diagnosis, classification, and treatment decisions. It has shown remarkable efficiency in processing medical images, detecting early-stage tumours, and identifying various diseases such as Alzheimer's, cancer, diabetes, chronic, heart disease, tuberculosis, stroke and cerebrovascular, hypertension, skin, and liver disease, significantly speeding up the diagnostic process and improving patient outcomes.
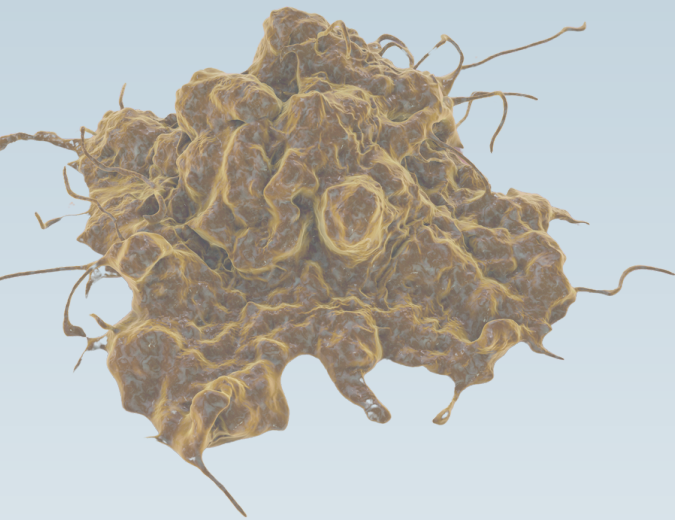
In cardiology, machine learning (ML) and deep learning (DL) are revolutionizing the diagnosis of heart diseases, utilizing advanced analysis of medical imaging such as CT scans, ECGs, and echocardiography. During the European Society of Cardiology (ESC) Congress 2023 held in Amsterdam, esteemed academics from the Swinburne University of Technology Sarawak Faculty of Engineering, Computing and Science recently presented their ground-breaking research entitled 'Deep Learning in Digital Health with ChatGPT: A Study on Efficient Code Generation'. This research demonstrated how ChatGPT, a sophisticated language model developed by OpenAI, could generate fully operational programming scripts based solely on natural language inputs. The feasibility was demonstrated by a successful real-world test in echocardiogram view classification, with accuracy rate exceeding 80%.

DEEP LEARNING IN DIGITAL HEALTH

Contributions to this research by cardiologists from the Sarawak Heart Centre, Dr Alan Fong and Dr Ong Tiong Kiam illustrated the remarkable balance between technical innovation and practical healthcare needs. As early as 2019, the group garnered international attention with their work on AI algorithms for echocardiogram analysis at the ESC Digital Summit in Estonia. Their earlier triumph involved employing deep denoising spatio-temporal autoencoder networks to learn visual and motion representations from multiple echocardiographic cross-sections and stress stages. The trained model enabled the classification and detection of spatio-temporal abnormalities in stress echocardiograms.

While AI harbours great potential in disease diagnosis and prediction, some limitations are worth addressing:

- **Limited Data Availability -** Training robust AI models requires vast amounts of labelled medical data. However, large amounts of high-quality labelled data are expensive and scarce, particularly for rare diseases. Hence, emphasizing the need for cost-effective data collection methods in digital pathology.

- **Model Granularity -** AI models might not capture the nuances of complex medical cases. Capturing intricate details of complex medical cases can be challenging for AI models. These models might struggle to differentiate between subtle variations in medical images or patient data, leading to misdiagnosis.

- **High Dimensionality -** Medical data often encompasses a vast array of features (data points) as compared to the number cases per disease. AI performance might fall short due to lack of substantial data. This high dimensionality can overwhelm AI models, making it challenging to analyse and extract meaningful insights.

- **Context Blindness** – AI might struggle to understand how changes in context (e.g., patient history, comorbidities, and other predisposing, precipitating, perpetuating, and present factors can affect diagnosis. This highlights the importance of incorporating contextual information into AI models for improved medical decision making with a better grasp of the broader context of the medical situation, without overlooking critical aspects of patient's condition.

- **Prioritization Issues** – AI might not prioritize caution, potentially leading to unnecessary tests (false positives). Prioritization issues may also arise if the training data set contains biases which could render misrepresentation across demographics or inherent bias in the training data. In keeping the four pillars of medical ethics, beneficence, and non-maleficence, while there is a potential for over-diagnosis due to overenthusiastic algorithms, striking a balance between efficiency and patient safety remains key.

Undoubtedly, challenges exist, but Rome was not built in a day. AI in the healthcare industry is still in its infancy stage. Therefore, effective collaboration between clinicians, researchers, and tech experts can lead to new methods that account for the special nature of medical information and the intricacies of diagnosis. Artificial intelligence holds immense promise for revolutionizing disease diagnosis and treatment, paving the way for a future with better health for everyone.

In a hospital where a myriad of departments including clinical, supportive, technical, ancillary services departments and many more cross function to provide quality care to patients, various application systems will be used in the process of delivery of medical care and hospital administration. With disparate application systems in a hospital, it is important to streamline the flow of data and operations across the hospital network.

Origin integrates clinical subsystems and devices in hospitals with HL-7 compliance, ensuring interoperability, allowing for secure and coordinated transfer of data from patient administration, financial management, and materials management to patient care, clinical laboratory automation, scheduling, and more. Integration with HL-7 interfaces allows the multidisciplinary team and stakeholders to access the latest clinical data uniformly across the hospital network, reducing the risks of miscommunication and exchange of incorrect information due to human errors. The integration of AI and ML with HL-7 interfaces has the potential to enhance data processing, analysis, and decision-making in healthcare, ultimately improving quality of care.

Origin is revolutionizing healthcare data integration with quality digital workflows. We invite collaborators to join us in unlocking the full potential of technology for improved patient care. We welcome anyone with a passion for healthcare, from tech developers and medical providers to researchers, to work together and leverage Origin's technology to achieve a healthier future for all.

Origin EMR & HIS IS HL7 -compliant

What is HL-7?
HL-7, or Health Level-7, is an international message standard that offers a standardised framework for communicating clinical and administrative health data between software platforms in the healthcare industry.

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