Academic Medicine Innovation Institute
SingHealth Duke-NUS

SingHealth DukeNUS ACADEMIC MEDICAL CENTRE

Alice Lee Innovation Centre of Excellence

DIGITAL INNOVATION



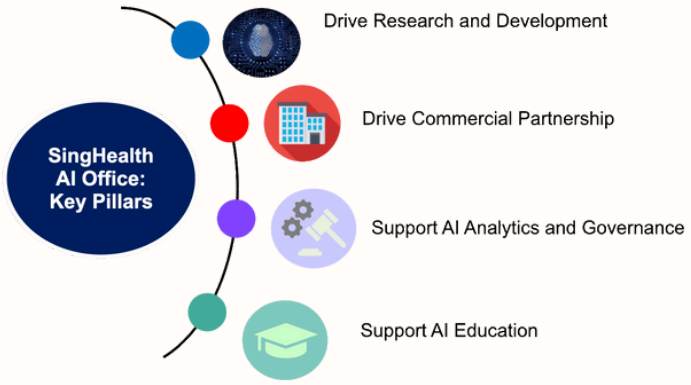
EXCLUSIVE INTERVIEWS

SingHealth AI Office: Leading the Charge in Healthcare AI

Introducing CHROMA: Advancing Medical Frontiers through Computational Health Research



THE SINGHEALTH AI OFFICE SUPPORTS AI PROJECT FOR HEALTHCARE USE, WHICH INCLUDES CLINICAL AND CLINICAL OPERATIONS, THROUGH ITS FOUR PILLARS: RESEARCH AND DEVELOPEMENT, ANALYTICS AND GOVERNANCE, COMMERCIAL PARTNERSHIPS AND EDUCATION.





"AI-DRIVEN HEALTHCARE TRANSFORMATION SPANS DIAGNOSTICS, TREATMENT, MONITORING, AND OPERATIONAL EFFICIENCY, WHILE PRESERVING DATA PRIVACY. WE SEE THAT A KEY DRIVER OF THIS IS SOVEREIGN, AGENTIC AI."

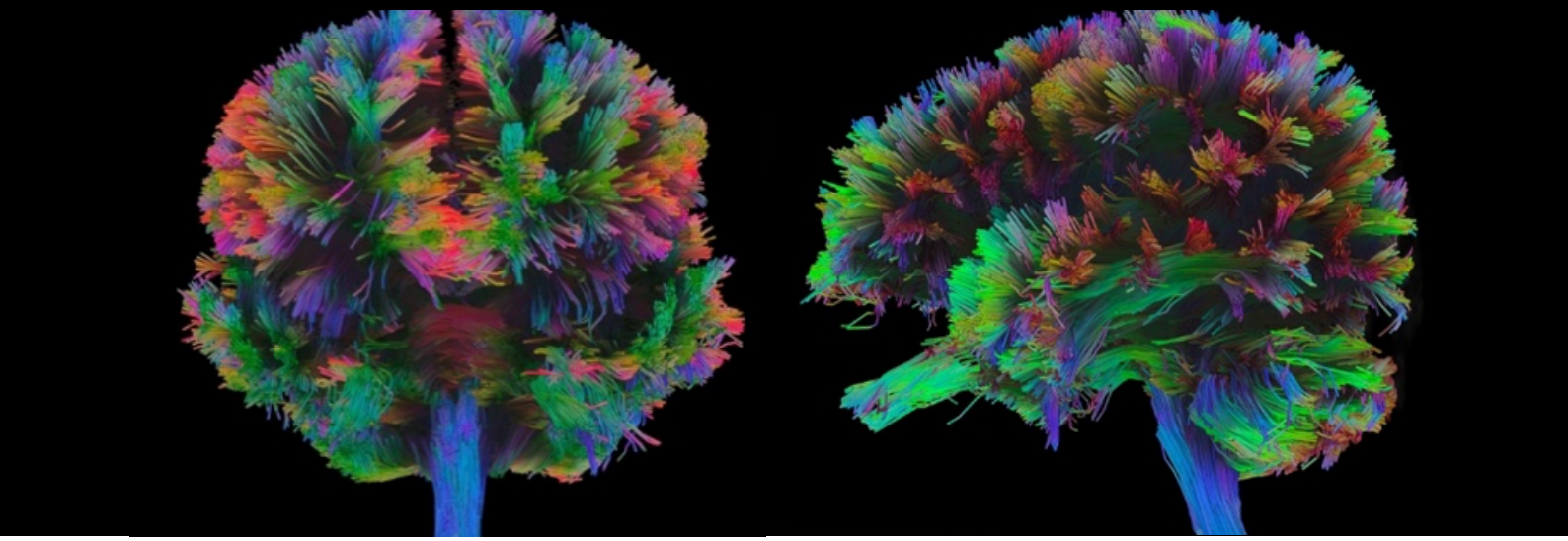
IRIS TAN
ASSISTANT DIRECTOR
SINGHEALTH AI OFFICE



Through the efforts of the AI Office, Enigma Health has establishing a suite within the A.L.I.C.E @ SGH Campus.

Enigma Health, a SingHealth Duke-NUS AMC spin-off, developed a small language model solution using sovereign AI workflow agents tailored for healthcare. It automates labour-intensive tasks—document scanning, data verification, health economics, and regulatory reporting—via task-specific generative AI, deployable on cloud, on-premises, or offline. The solution was developed by clinicians and AI scientists in the SingHealth AI Office, led by Assoc Prof Daniel Ting, based on deep healthcare system knowledge, to enhance efficiency, compliance, and patient care. The Singapore National Eye Centre has used it to streamline cataract surgery audits - Click here for more details.

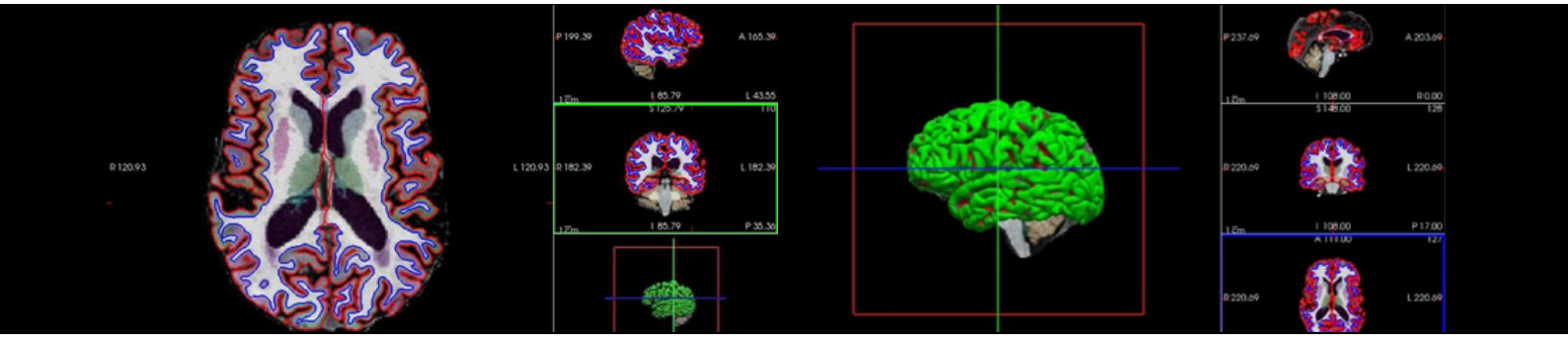
UNLOCK MEDICAL INNOVATION WITH CHROMA



Meet CHROMA - SingHealth's supercomputer, a collaboration between National Supercomputing Centre (NSCC) and SingHealth. Powered by NVIDIA DGX A100 GPUs and over 1,000 CPU cores, CHROMA supercharges your research, helping you turn big ideas into real-world solutions—faster.

NEURO.BRAIN project - spearheaded by the National Neuroscience Institute Neuro-Tech Platform utilizes CHROMA's high-performance computing to establish a comprehensive neuroimaging processing pipeline incorporating structural morphometric analysis and classification of diffusion tensor imaging (DTI) patterns to generate large-scale datasets of imaging biomarkers for the development of a proof-of-concept Artificial Intelligence/Machine Learning model. The use of CHROMA sped up their neuroimaging AI pipeline by 20%, saving them precious hours!

The colourful images shown above are Brain DTI which are MRI scan that shows brain connectivity in 3D. DTI is a visualized, colour-coded map of brain pathways, generated by the movement of water molecules through white matter tracts, which gives us an understanding of the brain's hidden microstructural properties.
Tapping on CHROMA to run imaging processing applications, the team performs brain segmentation that transform MRI scans into detailed atlas-based volumes and measures of brain structures, as seen in the images below.



"THANKS TO CHROMA TEAM FOR WORKING WITH US ON THE HIGH-PERFORMANCE IMAGING PROCESSING PIPELINE FOR NEURO-TECH PLATFORM!
- PRINCIPAL INVESTIGATOR, DR NICOLE KEONG"

National Neuroscience Institute
SingHealth

CHROMA
Computational Health Research and Optimisation for Medical Advancements

FOR MORE INFORMATION, PLEASE CONTACT CHROMA AT CHROMA.SUPPORT@SINGHEALTH.COM.SG



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Imagine Tomorrow's Care

KKH CAMPUS

ICSIVRSE: THE VIRTUAL TRAINING PLATFORM FOR EMBRYOLOGISTS LEARNING INTRACYTOPLASMIC SPERM INJECTION (ICSI)

The ICSIVRse is a virtual reality (VR) education tool developed to shorten embryologists' training duration to achieve competency in both the cognitive and psychomotor domains of learning the procedural steps and skills in ICSI . The ICSIVRse allows for repetitive practice and feedback to achieve proficiency and accuracy in the execution of ICSI procedural steps. It provides the convenience of concurrent training of trainees with minimal supervision, improving training outcomes and reducing use of biological materials. Overall, there is expected reduction in ICSI training duration, where time can be spent more effectively on clinical matters.

Pilot testing survey conducted with KKH embryologists has shown increased user satisfaction due to the sense of fun and appeal of VR, encouraging independent learning within a safe virtual environment.

ICSIVRse is now on its way to the next chapter to further enhance some of the features of the current solution.

ICSIVRse is now moving into Phase 2 of development, focusing on upgrading its current features with the ultimate goal of commercialising the solution

FOR MORE INFORMATION, PLEASE CONTACT OFFICE OF DIGITAL INTEGRATION, MEDICAL INNOVATION & CARE TRANSFORMATION (DIMICT) AT KKHMICT@KKH.COM.SG

DIGITAL INNOVATION @ CGH

FOR MORE INFORMATION, PLEASE CONTACT CGH OFFICE OF INNOVATION AT INNOVATION@CGH.COM.SG

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CGH CAMPUS

Pioneering AI-Powered Chest X-ray Solutions

PI – Clin Asst Prof Charlene Liew (Radiology), Data Scientist Lead – Srinath Sridharan



CXR AI Triage and AI Reporting Tool

An early adopter of AI in healthcare, CGH's successful implementation of AI-powered chest X-ray triage has been a transformative journey that paved the way for broader applications across Singapore's healthcare system. Unlike conventional X-ray triage on a first-in, first-out workflow approach, this AI-powered triage system that is deployed on AimSG automates the prioritisation of critical cases, successfully reducing the average turnaround time of inpatient cases by up to 97%.

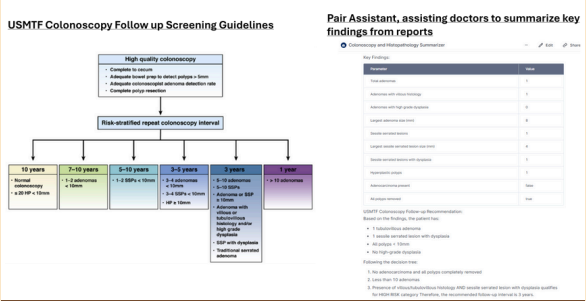
CGH's early experience demonstrates how thoughtful integration of AI solutions into clinical workflows can significantly enhance healthcare delivery while maintaining high standards of patient care. This successful implementation has created a blueprint for the national rollout of AI imaging capabilities across Singapore's public healthcare system by end-2026.

Building on this success, the technology is now being expanded to new use cases and care settings, with plans to roll this out across the public healthcare system by end-2026. The National Healthcare Group Geylang Polyclinic is using similar AI capabilities for case prioritisation, while the National Centre for Infectious Diseases will use chest X-rays for tuberculosis screening applications.

CGH's experience demonstrates how thoughtful integration of AI solutions into clinical workflows can address real-world challenges and significantly enhance healthcare delivery for impactful outcomes.

AI-Powered Gastroenterology Medical Report Summarisation

PI – Dr James Li (Gastroenterology), Data Scientist Lead – Srinath Sridharan



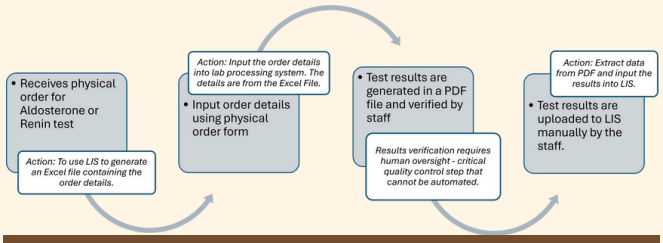
Sample Report

Changi General Hospital developed an innovative Generative Artificial Intelligence (GenAI) application that summarises colonoscopy and histopathology reports. Powered by a fine-tuned Large Language Model (LLM) on GovTech's PAIR platform, the application assists to provide doctors with structured, guideline-based summary recommendations to support clinical management decisions.

This frees up the doctors' time so that they can spend more time with the patients. It also serves as an independent "second reader" for doctors who will then be able to counter-check their clinical decisions with a reliable automated output.

RPA at SC3 Using Sikuli

PI – Clin Asst Prof Troy Puar (Endocrinology) & Dr Daryl Hee (Head, Shimadzu-CGH Clinomics Centre), Data Analyst – Bernard Koh



Laboratory Test Processing

The Shimadzu-CGH Clinomics Centre (SC^3) Lab Automate transformed the processing of administrative tasks in the laboratory through digital automation, enhancing efficiency to meet the a multi-fold rise in daily tests between 2023 and 2025.

Over four improvement cycles, the team developed an automated workflow that digitalised physical order forms, automated data entry, and streamlined result uploads, and achieved between 80%-100% accuracy in the various workstreams.

Notably, the automation halved the time required for data entry per test. Combined with reduced manual work, this allows staff to focus on critical tasks like result verification. The system now processes orders from multiple hospitals, demonstrating its scalability and effectiveness in managing high-volume laboratory operations.

POSITIONING SINGHEALTH AS REGIONAL'S HEALTHCARE INNOVATION HUB

A.L.I.C.E is proud to participate in HealthTechX Asia 2025 — Asia's dedicated platform for advancing healthcare innovation and technology — alongside SingHealth Intellectual Property (SHIP), the SingHealth Technology Incubator (SCOUT), the Impact Assessment Unit (IAU), and the Medical Technology Office (MTO). HealthTechX Asia brings together healthcare leaders, technology innovators, startups, investors, and policymakers from across the region to collaborate on solutions that improve care delivery, efficiency, and patient outcomes. This collective presence showcased the strength of SingHealth's innovation ecosystem and reinforced its role as a regional healthcare innovation knowledge hub and reference site. As part of this ecosystem, A.L.I.C.E demonstrated how it enhances collaboration across teams, leverages joint capabilities, and optimises resources to drive impactful healthcare solutions. The event provided a valuable platform for engagement, partnerships, and knowledge exchange across the regional healthtech landscape.



From Left to Right:
Sneha Srikanth (Executive, SHIP), Low Huiyu (Manager, SCOUT), Noel Sn (Assistance Manager, SERI), Melanie Choy (Executive, A.L.I.C.E @ SGH Campus, Elaine Tai (Senior Manage, IAU) Adeline Lim (A.L.I.C.E @ SGH Campus), Alex Goh (Business Developer, HiCura), Lim Ee Chien (Assistance Manager SHOFI) and Quinn Ng (ServLink)



From Left to Right:
Ng Yi Ting (Deputy Director, IAU), Nuraini Nazeha (Research Associate, DukeNus), Hong Wei Wei (Director, OST) and Low Huiyu (Manager, SCOUT)



Most Left: Low Huiyu (Manager, SCOUT)



Most Right: Melanie Choy (Executive, A.L.I.C.E @ SGH Campus,



Medicia.AI is a Singapore-based digital health company reimagining chronic care with structured, human-centered, and EMR-integrated care plans. Originally launched in collaboration with NCIS, Medicia.AI delivers intelligent care frameworks for oncology and other chronic conditions via its flagship platforms, Oncology Cloud and Research Cloud. Their technology bridges clinical precision with emotional support, boosting treatment adherence, reducing avoidable hospital visits, and generating real-world evidence for research. From diagnosis through survivorship, Medicia.AI empowers patients, caregivers, and clinicians with tools that transform care into a more personal, data-driven journey. Medicia.AI is actively expanding to support cardiometabolic and kidney care populations.

Medicia.AI strengthens healthcare systems by integrating intelligent digital infrastructure into daily clinical workflows. Through Oncology Cloud, hospitals deliver structured care plans that personalize treatment, manage side effects in real time, and improve care coordination. Their Research Cloud transforms clinical and patient-reported data into actionable insights, enabling predictive modeling, operational improvements, and faster innovation cycles. From increasing survival rates and reducing readmissions to improving quality of life and clinical throughput, Medicia.AI fosters measurable impact across patient, caregiver, and institutional outcomes. Their tools also align with national performance indicators and create sustainable models via value-based care and research collaboration.

Are there any collaborations with SingHealth?

Medicia.AI is pleased to share that they successfully completed a pilot project in partnership with SingHealth, the National Cancer Centre Singapore (NCCS), and Sengkang General Hospital. This collaborative effort validated the clinical, operational, and research value of the platform within a public healthcare environment.

Separately, we are currently working with the A.L.I.C.E @ SGH Campus team to explore new areas of collaboration, and we are hopeful to identify a partner within the SingHealth ecosystem to co-develop a diabetes care plan tailored to the local population.



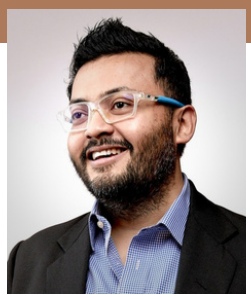
“User-centricity at Medicia.AI starts at the design level. Every care plan is co-created with patients, clinicians, and caregivers, ensuring that both medical and emotional needs are addressed. We use real-world patient feedback, behavior tracking, and multilingual educational content to ensure that users feel supported—not overwhelmed. Predictive alerts, caregiver modules, and culturally sensitive content empower users to engage confidently. Importantly, our AI tools never replace human judgment; instead, they augment clinical care with transparent, expert-built models, allowing institutions to maintain trust and compliance while continuously adapting to patient realities.”

EliteFit.AI is a Singaporean company in the business of providing a computer-vision based, AI driven, musculoskeletal assessments, physiotherapy protocols and fitness programs to businesses and end users. EliteFit.AI is a B2B movement AI engine that is easily integratable into healthcare, insurance, sports, fitness, public sector client apps and websites in order to enable higher revenue, greater differentiation & better patient outcomes. The company serves prominent clients including Singapore's Ministry of Home Affairs, Health Promotion Board, SATA CommHealth, and Indonesia's Siloam Hospitals.

ELITEFIT.AI

How does EliteFit.AI able to assist within the healthcare ecosystem?

EliteFit.AI revolutionises the healthcare ecosystem by providing AI-driven musculoskeletal assessments and full-length physiotherapy solutions. For patients, EliteFit.AI provides digital physiotherapy assessments and programs, enabling at-home treatment plans that reduce hospital visits and costs. Clinicians can therefore serve more patients and monitor progress through statistical reports, enhancing care efficiency. By partnering with healthcare providers like SATA CommHealth and Siloam Hospitals, EliteFit.AI drives revenue growth, optimises resource allocation, and improves patient outcomes through scalable, data-driven solutions, supporting preventive care and population health management.



Mr Ani Bhalekar
CEO & Co-founder of EliteFit.AI

Partnering with a leading institution like A.L.I.C.E @ SGH Campus has been a significant milestone for EliteFit.AI, strengthening our credibility and increasing our visibility within Singapore's healthcare landscape. Through this collaboration, we've gained valuable access to a wider network, including other public hospitals. Beyond clinical deployment, the partnership has opened doors to more AI research and clinical trials for us. This environment encourages innovation and allows us to contribute meaningfully to Singapore's national healthtech goals by developing scalable, evidence-based solutions that make a real difference.

With the strong support of the A.L.I.C.E @ SGH Campus team, we have been fortunate to engage with several key stakeholders at SingHealth through various opportunities. The team has invited EliteFit.AI to showcase our solutions at technology workshops hosted by A.L.I.C.E @ SGH Campus, along with participation in other networking events.

How do you maintain user-centricity in your digital innovation while addressing real-work needs?

EliteFit.AI can maintain user-centricity in its digital innovation while addressing real-world needs by offering the following.

By aligning AI innovation with user needs and healthcare realities, EliteFit.AI ensures impactful, patient-focused solutions at all times

1. **Accessibility & Affordability**: EliteFit.AI offers scalable, cost-effective programs to democratise access to physiotherapy, addressing real-world challenges like resource constraints and high treatment costs.
2. **Personalised User Experience**: Leveraging on AI to tailor physiotherapy programs based on individual assessments, ensuring treatments align with users' specific health conditions, goals, and progress, which can enhance engagement and outcomes.
3. **Gamification**: Empowering patients and clinicians through interactive, accessible, and intuitive designs that drive engagement and support at-home care.
4. **Data-Driven Insights**: Provide clinicians with real-time, actionable reports and ensure progress tracking, addressing real-world needs like efficient patient management and reduced hospital visits.
5. **Continuous Feedback Loop**: EliteFit.AI incorporates user feedback and usage analytics to refine product features, ensuring solutions remain relevant to evolving healthcare demands.

OUR PARTNERS
















































































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