SALUS Medical & Life Sciences AI

We are on a Mission to Improve Healthcare with AI

SALUS is HACARUS' platform for Medical & Life Sciences AI solutions. We work with Medical imaging data such as CT & MRI scans, time series data, such as ECG data, and medical record to create precise, complex tools, that aid care givers and researchers to provide better, faster and safer treatment, based on data driven insights.

Benefits of Hacarus AI

Hacarus AI understands patient data the way doctors and medical professionals do – by identifying the key symptoms and features of a condition. This human centric approach delivers a series of advantages:

AI made from Human Experts and Sensor generated Data

Our Technology is built from digitizing specialist expertise to create predictive models – all insights are therefore understandable by doctors and physicians.

Applicable Even to Rare Conditions

Unlike competing solutions that require data samples in the tens of thousands, Hacarus can create reliable models with as little as fifty samples. This means Hacarus can provide predictions even for rare conditions, where the available data set is small.

Faster & More Energy Efficient

Thanks to its lightweight design, Hacarus technology is up to 5 times faster to deploy and uses only 1% of the energy required by competing techniques.

Integrates with deployed equipment

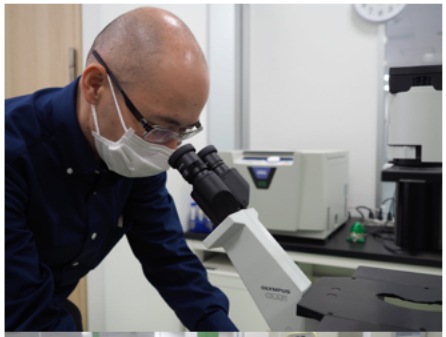
Hacarus technology can run on the Cloud or on the Edge, supporting various types of equipment, allowing for easy integration regardless of deployment environment. Our capabilities span across Software into the Hardware domain.

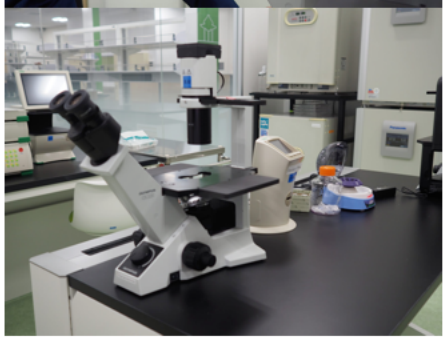
Life Sciences Use Cases

Genome Analysis
Using HACARUS AI expertise we can assist in tasks such as the identification, measurement or comparison of genomic features including DNA sequence, structural variation, gene expression, or regulatory and functional element annotation at a genomic scale.

Regenerative Medicine
Fueled by HACARUS AI algorithms we can aid in developing methods to regrow, repair or replace damaged or diseased cells, organs or tissues. Including the generation and use of therapeutic stem cells, tissue engineering and the production of artificial organs.

AI-Assisted Drug Discovery
With HACARUS built AI tools we can simplify drug discovery, using machine learning techniques focused on pattern recognition, material informatics and data modeling.





HACARUS

Hacarus is the leading provider of lightweight and explainable AI solutions enabled for the cloud and edge. Its solutions are used in the medical and manufacturing fields.

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Real World Case Studies & Use Cases

Medical Case Studies

Joint research for Liver Cancer diagnosis support tool

A current shortage of specialists possessing the required knowledge to interpret the scans means that the healthcare system is increasingly unable to meet a growing demand for diagnosis. Therefore HACARUS and Kobe University will conduct joint research aiming to:

(1) Detect risk areas in MRI images using AI trained by using supervised learning. (2) Perform HCC disease type classification in risk areas. (3) Create an accurate AI type classification and diagnosis support system.

AI support system for prevention and early diagnosis of cervical cancer

HACARUS and Kyoto University aim to digitize specialist oncologist's know-how and during the joint R&D project the two parties will: Build a highly accurate AI model for early cancer detection using colposcopy video data, enable AI fueled diagnosis support in line with the diagnosis and treatment standards of Japan and construct a tool that can identify lesions with high accuracy and assist diagnosis of tissue sampling in facilities where specialists are not present.

The results will be presented in academic papers, and at related conferences, as well as exhibited at trade-shows.

ECG Analysis for Humans — AI based anomaly detection in ECG signals - Solution development with ITK Engineering

The German technology company ITK Engineering – a subsidiary of Bosch – and Hacarus have jointly developed a proof of concept for a personalized patient monitoring system, serving to evaluate ECG signals. It not only evaluates anomalies in a single patient heart's ECG in near real-time, but also provides at-a-glance comparisons with the expected normal ECG curve.

Heart Gaze ECG Monitor by ITK Engineering

Smarter Animal Health — Partnership with DS Pharma Animal Health

DS Pharma Animal Health and Hacarus are developing a non-intrusive ECG measurement and analytics tool for animals, based on a connected sheet that has the ability to capture vital heart data from standing animals paws. The sheet is connected to an edge base station, which includes the AI software by Hacarus, which then communicates with a cloud platform (あにさぽ®) for veterinarians provided by DS Pharma Animal Health.

Brain Stroke Diagnostics - Scaling Specialist Knowledge and Saving Lives

Working together with a leading Medical University in Japan and a partner in the medical industry Hacarus is currently building an AI engine capable of aiding doctors in diagnostics. By combining data from MRI and other vital patient data, our model is able to accurately aid doctors in selecting the appropriate treatment within seconds.