Press Release

ITK Engineering and Hacarus present novel AI technology applied to patient heart's ECG data

Proof of concept detects and pinpoints anomalies in ECG data in near real-time on edge devices.

Ruelzheim, 18.11.2019

The German technology company ITK Engineering, headquartered at Rülzheim, Rhineland-Palatine, and the Japanese startup 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. Missing interpretability has been one major acceptance hurdle for classic deep learning approaches in medical applications as the decision-making process of AI has been a black box up to now. The novel AI technology is visualized in a form that can be interpreted by doctors and supports them in fast and accurate judgement. "Our sparse modeling-based technology can extract results even from small amounts of data, and the lightweight algorithm performs even on embedded systems such as wearables," says Kenshin Fujiwara, CEO and founder of Hacarus.

ITK Engineering GmbH
Headquarter Ruelzheim
Im Speyerer Tal 6
76761 Ruelzheim, Germany

T: + 49 (0)7272 7703 – 223
F: + 49 (0)7272 77036 - 100
presse@itk-engineering.de

www.itk-engineering.com
www.itk-karriere.de/en

Follow us on:

Press Release

Unveiling at the world's leading medical industry event
Hacarus and ITK Engineering present the joint technology demonstrator for the first time at Düsseldorf's MEDICA on November 18 through 21, 2019. The proof of concept was co-engineered in Japan and Germany, integrated by ITK Engineering based on 25 years of systems engineering experience in medical grade connected systems including wearables, mobile medical apps, algorithms and secure interfaces. "The application in cardiology on real-time ECG data is just one example among many that shows how greatly AI solutions can benefit patients and doctors – we see further applications in medical imaging, therapy support in mental health and in laboratory diagnostics," says Takashi Someda, CTO of Hacarus.

Richard de Klerk, Head of R&D Medical Systems Engineering at ITK Engineering says: "At MEDICA, we are going to show visitors that the benefits for the patient can go hand in hand with patient safety, cyber security and data privacy. These are fundamental requirements for CE or FDA approval for a medical device."

ITK and Hacarus build on innovation, experience and know-how
Hacarus kicked off the pre-commercial rollout of its medical AI solutions in 2018, after four years of research and development. Hacarus' sparse modeling- based technology is currently being evaluated both in Japan and Germany for applications that support medical trials, preemptive treatment and medical diagnostics.

ITK Engineering brought many years' know-how in the areas of software and systems engineering, systems integration, device connectivity and cyber security to bear in this collaborative effort to develop a proof of concept. These areas are becoming increasingly important in the course of digital transformation. ITK Engineering has been rising to the associated challenges as an ISO 13485- and ISO 27001-certified development partner.

The technical proof of concept described in this press release is a feasibility study which is currently neither commercially nor clinically available.

Visit Hacarus at MEDICA 2019 on November 18 through 21, 2019, in Düsseldorf, in hall 13 at booth E56-13.

Visit our keynote presentation at COGNITIVE:HEALTH on November 28th, 2019, in Berlin.

Press Release

Press Contact:
Dr. Uli Kreutzer
Phone: +49 89 8208598-223
E-Mail: presse@itk-engineering.de

About ITK Engineering
ITK Engineering GmbH was established in 1994 as "Ingenieurbüro für technische Kybernetik" and is an internationally operating technology company with customers in the automotive and aerospace industries as well as in building and medical technologies, motorsports, robotics and transportation. In addition to tailored technical consulting and development services, the company offers turn-key systems in the fields of software engineering, embedded systems, model-based design and testing as well as control systems design and signal processing. With a staff of 1,200 associates, ITK is headquartered in Rülzheim (Palatinate) and has nine branch offices in Germany. In addition, ITK is represented in the USA, in Japan, Spain and Austria. Worldwide, 1,300 associates are working for the engineering partner. Since 2017, ITK Engineering is a 100-percent subsidiary of the Robert Bosch GmbH.
www.itk-engineering.com