News Release

June 9,2025
ExaWizards Inc.
(TSE Code No.4259)
ExaMD Inc.

ExaMD, a Member of the ExaWizards Group, Research and Development of Dementia Diagnosis SaMD Published in International Medical Journal "PLOS ONE"

- High-precision and energy-saving AI model can be installed on smartphones, under development with priority review designation from the Ministry of Health, Labour and Welfare -

ExaMD Inc. (Minato-ku, Tokyo, Representative Director: Koji Hazama; hereinafter, “ExaMD”), a member of the ExaWizards Group, announces that its research paper on a medical device program (ML-SaMD[*1]) that diagnoses dementia using AI under development has been published in the international medical journal "PLOS ONE". The results of this research and development were achieved through joint research with Showa University School of Medicine (Associate Professor Takeshi Kuroda, Associate Professor Kouzou Murakami, Professor Hidetomo Murakami, et al.) and Kanazawa University (Professor Kenjiro Ono). The SaMD is currently under development for medical device approval and received designation for priority review under the innovative program medical device designation system from the Ministry of Health, Labour and Welfare in February 2025[*2].



The AI model developed for dementia diagnosis was published in PLOS ONE as scientifically and clinically valuable.
The ML-SaMD under development by ExaMD is equipped with a uniquely developed specialized AI, offering high diagnostic accuracy and the ability to be installed on general-purpose devices such as smartphones. As the AI model size is kept small, it is advantageous in terms of energy consumption, being energy-saving and low-cost. Its features, such as easy availability anytime, anywhere, are highlighted, aiming to lead to early detection and treatment in clinical settings.
This paper reports on the AI's performance in distinguishing between patients with cognitive decline and healthy individuals, with the cooperation of Showa University School of Medicine and Kanazawa University. It shows excellent results for cognitive decline determination with an accuracy of 0.950, sensitivity of 0.875, specificity of 1.000, and an average area under the curve of 0.990.

ExaMD and ExaWizards will leverage the knowledge gained from this research to accelerate the development and social implementation of AI technology that contributes to the early detection and prevention of dementia.

☑ **Paper Information**
Title: Utility of artificial intelligence-based conversation voice analysis for detecting cognitive decline
Authors: Takeshi Kuroda, Kenjiro Ono, Masaki Onishi[*3], Kouzou Murakami, Daiki Shoji, Shota Kosuge, Atsushi Ishida, Sotaro Hieda, Masato Takahashi[*3], Hisashi Nakashima[*3], Yoshinori Ito, Hidetomo Murakami (ExaWizards affiliations are *3. Masato Takahashi is a director at ExaMD)
Journal: PLOS ONE
URL: https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0325177

*1 ML-SaMD: Abbreviation for Machine Learning - Software as a Medical Device
*2 ExaMD Press Release: ExaMD Press Release

【ExaMD Corporate Profile】
Company name: ExaMD Inc.
Location: 4-2-8 Shibaura, Minato-ku, Tokyo, 5F
Established: February 2024
Representative: Koji Hazama, Representative Director
Business: Planning, development, sales, and alliance of products and services using multi-modal AI technology to solve social issues related to healthcare
URL: https://examd.com/

【ExaWizards Corporate profile】
Company name: ExaWizards Inc
Location: 4-2-8 Shibaura, Minato-ku, Tokyo, 5F
Established: February 2016
Representative: Makoto Haruta, Representative Director & President CEO
Business: Industrial innovation and resolution of social issues via AI service development
URL: https://exawizards.com/en/

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