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TMAK; Emotion Estimation, Mental Health Application, Information Recommendation - Application for Stress Estimation Model and Mild Cognitive Illness Detection

Kazuyuki Matsumoto

Engineering, Tokushima University, Japan

Abstract

We are conducting research on several main themes at TMAK: Trustworthy Multimodal Affective Intelligence and Knowledge Engineering Lab.First, we are researching how to estimate human emotions from multimodal information (audio, language, images) and apply this to assist in the diagnosis of mental disorders, mental health, and dementia. Second, we are analyzing interest and reputation information from diverse web reviews and social media posts to utilize it for information recommendation. Third, we are developing empathetic dialogue systems by leveraging the recent rapid advancements in multimodal large-scale language models.In all of these studies, feature extraction from large-scale data is necessary, and a big data analysis platform is essential. Our laboratory is conducting research on AI model lightweighting and is developing language models, emotion estimation, and stress estimation algorithms that can run on local edge devices.In this presentation, we will discuss our current main research themes?stress estimation models and multimodal cognitive function estimation technology?by presenting examples of previous research and outlining our solutions using our proprietary technology, as well as future prospects