OneCareAI: AI Powered Neurovascular Health Monitoring

Description

Stroke, a major cause of global death and long-term disability, arises from a combination of factors including cardiovascular conditions such as atrial fibrillation (AF), modifiable lifestyle factors like diet and physical activity, and a spectrum of genetic and molecular determinants. Within the AI-SPRINT EU project, we have created a technology designed for continuous monitoring of stroke risk to aid in prevention, leveraging artificial intelligence (AI) and High Performance Computing (HPC) to tackle this significant health issue. This technology utilizes electrocardiogram (ECG) data collected from smartwatches and other ECG devices and incorporates lifestyle information via a mobile app, addressing the first two dimensions of stroke risk (AF and lifestyle).

This initial phase has successfully demonstrated the viability and market potential of this approach through dedicated pilot studies. Building on this foundation, we are poised to embark on a pioneering endeavor to incorporate the third critical dimension of stroke risk: genetic and molecular biomarkers.

In collaboration with Sant Pau Hospital in Barcelona, we are refining and enhancing the technology's predictive capabilities by integrating stroke multi-omics data. Following the BSC spinoff creation roadmap, this proposal aims to implement and bring to market a more accurate and personalized AI model for assessing stroke risk that can enhance preventive strategies across the general population when integrated into commonly used wearable technologies, specifically smartwatches equipped with ECG sensors.

We pledge to develop a validated, market-ready product poised to deliver its transformative business potential by tapping into the expanding market for health-focused wearables. By advancing to market deployment, guided by a comprehensive and clear regulatory roadmap, we strive to pioneer advancements in preventive stroke care, fostering widespread adoption and creating economic and social impact.

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