CrowdHEALTH

Collective wisdom driving public health policies

Decision support for public health policy makers based on integrated heterogeneous health data

In the last few years information and communication technologies as well as sensors and applications that support personalized medical treatment increasingly emerged in health service – also known as "e-health". These technologies allow for the collection of extremely large amounts of heterogeneous data, which, however, are distributed among different health care providers and systems.

The aim of the international and multidisciplinary collaborative project CrowdHEALTH is to integrate these heterogeneous and distributed data uniformly and to provide analysis findings to decision-makers in the healthcare sector. For this purpose, the project partners develop a secure digital platform that integrates Big Data technologies along the entire data path and provides data as a service (DaaS) and analysis tools. This is intended to support stakeholders from the health sector for the development of public health objectives and measures. In addition, the project proposes a change to holistic patient records, which supplement conventional health records with additional health-related data, such as activity, lifestyle and nutritional data.

Therefore, the DFKI research department Cyber-Physical Systems develops intelligent support systems that enable the automated collection of reliable, high-quality data on health-related factors, such as daily activities or dietary habits, which are compacted into holistic patient data. In addition, Big Data algorithms developed in CrowdHEALTH analyse and compare the health records in order to, for example, identify possible correlations between lifestyle, nutritional habits and activities to the health status.

In CrowdHEALTH, more than 200,000 citizens will participate in five pilot studies conducted by the cooperating institutions in different European countries. Apart from the quality, the reliability and completeness of the collected data and analyses, data privacy and protection aspects play a central role.

Duration: 04/2017 – 03/2020

Partners:
- Atos (Spain) – Coordinator
- University of Piraeus Research Centre (Greece) – Technical Coordinator
- BioAssist (Greece)
- Care Across (UK)
- German Research Center for Atificial Intelligence (Germany)
- Engineering (Italy)
- European Federation for Medical Informatics (Switzerland)
- Fundación para la Investigación del Hospital Universitario La Fe (Spain)
- Information Catalyst (UK)
- Jožef Stefan Institute (Slovenia)
- Karolinska Institutet (Sweden)
- LeanXcale (Spain)
- National Institute of Public Health (Slovenia)
- National Organization for Health Care Services Provision (Greece)
- Siemens (Romania)
- Singular Logic (Cyprus)
- University of Ljubjiana (Slovenia)
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