

Propunere de parteneriat in cadrul EU4Health, transmisa de catre Reprezentanta permanenta a Republicii Cehe de pe langa Uniunea Europeana privind Apelul pentru propuneri - Promovarea adoptarii inteligenței artificiale în sănătate (DI-g-24-76)

Vă rugăm să regăsiți mai jos, informații suplimentare privind oferta de parteneriat pentru acest proiect:

(https://hadea.ec.europa.eu/programmes/eu4health/calls-and-contracts/tentative-calendar_en).

National eHealth Centre of the Ministry of Health of the Czech Republic offers cooperation on the DI-g-24-76 call:

Specifically, we offer our cooperation in the field of science, research and practical experience with clinical practice and the introduction of artificial intelligence into clinical practice in university or regional type medical facilities. Directly managed organizations (faculty hospitals or specialized workplaces) of the Ministry of Health of the Czech Republic have experience with the introduction of artificial intelligence into clinical practice and with research activities. Specialties in which we have experience and use artificial intelligence are, for example: emergency medicine, diabetology (diabetic retinopathy assessed from the fundus of the eye), neurology, dermatology, dentistry, gastroenterology, cardiology, radiology. We are able to involve experts with experience from national and international projects in the project. Medics, IT experts, biomedical engineers or experts in regulation, legislation, certification and processes in the healthcare sector are interested in the given issue. We have an expert team ready that would be happy to take part in the DI-g-24-76 challenge. If necessary, we will send the professional resume of the main members of the professional team.

We are ready to share information and experience. We also aim to promote and support research in the field of artificial intelligence applications and innovative technologies in medicine. Our research focus includes the following selected key areas:

- 1. Diagnosis and treatment:** Use of AI to improve diagnostic processes, disease prediction and personalized treatment.
- 2. Virtual and augmented reality:** Implementation of VR and AR technologies in medical education and patient therapy (e.g. VR rehabilitation, use of VR in social services, etc.).
- 3. Healthcare data and analysis:** Testing and implementation of big data analysis tools.
- 4. Robotics and automation:** Integration of robotic systems or automation of routine medical tasks.
- 5. Ethics and Legal Framework:** Addressing the ethical and legal issues associated with the use of AI and technology in medicine, science and clinical research.
- 6. Recommendations and workflows:** Creating recommendations for clinical practice. Implementation of innovative technologies in connection with cyber security and data management.
- 7. Education and training:** Participation in the preparation of educational events, workshops or conferences. Definition of "Education in AI in Medicine" - what should be the content, how and whom to train.

The key members of the team:

Associate Professor Ondřej Volný, M.D., Ph.D. FESO - physician and scientist with experience in clinical practice and scientific research. International experience from abroad and cooperation on many international projects.

prof. Ing. Radek Martínek, Ph.D. - vice dean for science and research at VŠB – TECHNICAL UNIVERSITY Ostrava. An academic worker who focuses on artificial intelligence and its implementation. International experience from abroad and cooperation on many international projects.

Ing. Jan Valošek, Ph.D. - researcher at the Polytechnic University of Montreal (Canada). Focuses on the application of artificial intelligence in the medical field and the development of deep learning methods for the analysis of medical images.

Projects:

The use of artificial intelligence in the care for stroke patients: Ostrava, Czech Republic - The Center for the Treatment of Vascular Strokes of the Ostrava University Hospital has been integrating Brainomix 360, a cutting-edge artificial intelligence tool, into its clinical practice for five years.

MR relaxometric determination of the degree of involvement of the basal ganglia in newborns with hypoxic-ischemic encephalopathy - The aim of the project is to support the diagnosis of the involvement of the central gray matter of the brain from magnetic resonance images. A partial output of the project will be a hardware solution of the monitoring system in the form of a sensory lounger. The next output will be a SW application that will enable control of the monitoring system and processing of the sensed biosignals in real time. These tools will allow monitoring the movement of the examined newborn and obtaining better quality images while reducing the necessary examination time. Another output will be a software tool to support diagnostics enabling quantitative monitoring and automatic evaluation of disability progression over time using algorithms based on artificial intelligence. Partial results of the project will be presented at international conferences and published in high-impact journals.

We offer a high-quality and experienced scientific team with a focus on artificial intelligence in healthcare, which has experience with the scientific part of the issue as well as with deployment and use in clinical practice.