Neural network software package for decision support in the diagnosis of lung diseases based on X-ray and tomographic images

COUNTRY OF ORIGIN	IDENTIFIER	PUBLISHED	LAST UPDATE	DEADLINE
Belarus	BO6247	2023-02-23	2023-02-25	

Linked profile in other language

Нейросетевой программный комплекс для поддержки принятия решений при диагностике заболеваний легких на основе рентгеновских и томографических изображений

Responsible

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Summary

United Institute of Informatics Problems offers consumers a neural network software package for decision support in the diagnosis of lung diseases using x-ray and tomographic images under a manufacturing agreement and is looking for partners to conclude a distribution services agreement.

Description

Designed to automate the processes of diagnosing lung diseases using computed tomography and x-ray images based on deep learning methods and artificial intelligence. The problems of lung segmentation, isolation of neoplasms and quantitative assessment of lesions are solved. The application is implemented as a specialized website.

Included in the Catalog of exhibits (TOP DEVELOPMENTS by exposition clusters) of the exhibition of scientific and technological achievements "Intellectual Belarus 2023".

Advantages and Innovations

Innovative technical and software solutions.

Stage of development

Prototype available for demonstration (TRL7)

Funding source

State budged
Internal

IPR status
Secret know-how

Sector group
Healthcare
ICT Industry & Services

Type and size of client
R&D institution

Year established
1965

NACE keywords
J.62.0 - Computer programming, consultancy and related activities
J.62.02 - Computer consultancy activities
M.72.19 - Other research and experimental development on natural sciences and engineering
M.74.90 - Other professional, scientific and technical activities n.e.c.

Turnover (in EUR)
10-20M

Already engaged in transnational cooperation
Yes

Additional comments
United Institute of Informatics Problems of the National Academy of Sciences of Belarus is the leading organization in the Republic of Belarus for fundamental and applied research in the field of information technologies: design automation, applied mathematics, supercomputer technologies, bioinformatics and medical informatics, geographic information systems, digital cartography, information space technologies, Grid-technologies. The Institute is a provider of the scientific and educational Internet in Belarus, participates in the development of recommendations on the use of the results of scientific research, scientific support for informatization processes in the Republic of Belarus, the development of forecasts in the relevant fields of science and technology, and the training of highly qualified personnel.

Scientific directions:
- automation of engineering systems design;
- processing and recognition of signals, images, speech;
- geoinformation systems;
- input and output of video information;
- operations research and discrete optimization;
- data protection;
- decision-making in emergency situations;
- bio- and medical informatics;

- computer networks, databases and telematic applications;
- supercomputer technologies and parallel computing, Grid technologies;
- information and reference systems.

The strategic goal of the UIIP NAS of Belarus is the creation and implementation of systems developed on the basis of modern scientific theories and methods of information technology. At the same time, the main directions are the development and creation of high-performance systems and advanced technical base of network technologies based on the principles of GRID and cloud computing. Integration of high-performance computing resources of the institute into the European and world network will create conditions for the export of services to other countries. Another important export factor should be the computing complexes and systems created in the laboratories of the institute and designed as a finished hardware and/or software product. The areas of application of these products are automation of the full life cycle of products in industry and electronics, medical informatics, space information systems, information systems in management and government, public information services, and others.

Along with the expansion of scientific and technical cooperation with partners from the CIS countries, Western and Eastern Europe, much attention was paid to expanding the geography of scientific and technical cooperation and entering new markets for scientific and technical products (China, the countries of the Persian Gulf and a number of other countries).

The strategic goal of the implementation of international projects is to increase the competitiveness of domestic scientific and technical products, their promotion to the world market, the maximum attraction of foreign investment in the research sector of the Republic of Belarus.

Languages spoken
Russian

INFORMATION ABOUT PARTNERSHIP

Type of partnership considered
Distribution services agreement
Manufacturing agreement

Type and role of partner sought
Consumers interested in purchasing a neural network software package for decision support in the diagnosis of lung diseases using x-ray and tomographic images under a manufacturing agreement.

Partners interested in purchasing a neural network software package for decision support in the diagnosis of lung diseases using X-ray and tomographic images under a distribution services agreement.

Type and size of partner sought
University

ATTACHMENTS
Neural network software package.jpg