THE IMPORTANCE OF SUI INTELECT IN THE TREATMENT OF NEUROLOGICAL DISORDERS

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Annotation. *This article highlights the importance and areas of application of artificial intelligence (SI) technologies in neuroscience. Modern SI Systems are increasing efficiency in early detection, analysis, and treatment of brain disorders. In particular, in the diagnosis of diseases such as neurodegenerative diseases (Alzheimer's, Parkinson's), stroke, epilepsy, medical indicators at high resolution are being analyzed through SI algorithmsation. This article highlights the importance and areas of application of artificial intelligence (SI) technologies in neuroscience. Modern SI Systems are increasing efficiency in early detection, analysis, and treatment of brain disorders. In particular, in the diagnosis of diseases such as neurodegenerative diseases (Alzheimer's, Parkinson's), stroke, epilepsy, medical indicators at high resolution are being analyzed through SI algorithms. The article analyzes the advantages, current challenges, and future prospects of SI technologies.*

Keywords: *artificial intelligence, neurology, diagnosis, neurovisualization, neuro-degenerative diseases, Alzheimer's disease, parkinson's disease, stroke, epilepsy, medical technology, diagnostics.*

NEVROLOGIK KASALLIKLARNI DAVOLASHDA AQL-IDROKNING AHAMIYATI

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Annotatsiya*. Ushbu maqolada neyrologiya sohasida sun'iy intellekt (SI) texnologiyalarining ahamiyati va qo'llanilishi ko'rsatiladi. Zamonaviy SI tizimlari miyadagi kasalliklarni erta aniqlash, tahlil qilish va davolash samaradorligini oshirmoqda. Xususan, neyrodegenerativ kasalliklar (Altsgeymer, Parkinson), insult, epilepsiya kabi kasalliklarni tashxislashda SI algoritmlari yordamida yuqori aniqlikdagi tibbiy ko'rsatkichlar tahlil qilinadi. Zamonaviy SI tizimlari miyadagi kasalliklarni erta aniqlash, tahlil qilish va davolash samaradorligini oshirmoqda. Xususan, neyrodegenerativ kasalliklar (Altsgeymer, Parkinson), insult, epilepsiya kabi kasalliklarni tashxislashda tibbiy ko'rsatkichlar yuqori aniqlikdagi SI algoritmlari yordamida tahlil qilinadi. Maqolada SI texnologiyalarining afzalliklari, hozirgi qiyinchiliklari va kelajak istiqbollari tahlil qilinadi.*

Kalit so'zlar*: sun'iy intellekt, nevrologiya, tashxis, neyrovizuallashtirish, neyrodegenerativ kasalliklar, Altsgeymer kasalligi, Parkinson kasalligi, insult, epilepsiya, tibbiyot texnologiyasi, diagnostika.*

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ВАЖНОСТЬ ИСКУССТВЕННОГО ИНТЕЛЛЕКТА В ЛЕЧЕНИИ НЕВРОЛОГИЧЕСКИХ РАССТРОЙСТВ

Аннотация. *В этой статье освещается важность и области применения технологий искусственного интеллекта (ИИ) в неврологии. Современные ИИ-системы повышают эффективность раннего выявления, анализа и лечения заболеваний головного мозга. В частности, при диагностике таких заболеваний, как нейродегенеративные заболевания (болезнь Альцгеймера, болезнь Паркинсона), инсульт, эпилепсия, медицинские показатели с высоким разрешением анализируются с помощью алгоритмов SI. В данной статье освещается важность и области применения технологий искусственного интеллекта (SI) в неврологии. Современные СИ-системы повышают эффективность раннего выявления, анализа и лечения заболеваний головного мозга. В частности, при диагностике таких заболеваний, как нейродегенеративные заболевания (болезнь Альцгеймера, Паркинсона), инсульт, эпилепсия, медицинские показатели с высоким разрешением анализируются с помощью алгоритмов СИ. В статье анализируются преимущества, текущие проблемы и перспективы развития информационных технологий. Ключевые слова: искусственный интеллект, неврология, диагностика, нейровизуализация, нейродегенеративные заболевания, болезнь Альцгеймера, болезнь Паркинсона, инсульт, эпилепсия, медицинские технологии, диагностика.*

Ключевые слова: *искусственный интеллект, неврология, диагностика, нейровизуализация, нейродегенеративные заболевания, болезнь Альцгеймера, болезнь Паркинсона, инсульт, эпилепсия, медицинские технологии, диагностика.*

Introduction.

Neurology is the field of medicine that deals with the structure, function, diseases and treatment of the human nervous system. The complexity of the nervous system, individual differences and unclear symptoms of many diseases require new approaches in the field of Neurology. And the emergence and development of artificial intelligence (SI) Technologies is causing revolutionary changes in neurology In recent years, artificial intelligence (SI) technologies have become widely used in the medical field. Especially in the direction of neurology — that is, the study and treatment of diseases of the nervous system, the role of Si is growing. Artificial intelligence technologies are becoming an important tool in the deep study of brain activity, early detection of diseases, finding new methods of treatment and maintaining patient monitoring.

It is difficult to show exactly one person as the “first creator” or founder of artificial intelligence, since this field was formed as a result of the annual work of many scientists and specialists. But the main persons who played an important role in the development of artificial intelligence are the following: • Alan Turing is one of the founders of Computer Science, who proposed the famous “Turing Test” in his 1950 paper “Computing Machinery and Intelligence”. He is credited with laying the earliest theoretical foundations of the idea of artificial intelligence.

• John McCarthy-the first use of the term “artificial intelligence” in 1956 and the same

year he founded The Dartmouth Conference, where it is considered the official beginning of the field of artificial intelligence. He is often referred to as the" father of artificial intelligence". Thus, while Alan Turing laid theoretical foundations, John McCarthy formulated artificial intelligence as an independent scientific field.

Main part 1. The main areas of artificial intelligence in neurology

* Diagnosis (diagnostics): the results of neurovisualization such as MRI, CT, EEG are automatically analyzed using SI. This makes it possible to detect diseases such as stroke, tumors, Alzheimer's, Parkinson's at an early stage.

• Prediction: data-based SI algorithms can predict the risk of disease progression.in part 1. The main areas of artificial intelligence in neurology

* Diagnosis (diagnostics): the results of neurovisualization such as MRI, CT, EEG are automatically analyzed using SI. This makes it possible to detect diseases such as stroke, tumors, Alzheimer's, Parkinson's at an early stage.

• Prediction: data-based SI algorithms can predict the risk of disease progression.

* Selection of treatment plan: based on the principle of Personalized Medicine, an individual treatment strategy is developed for each patient.

* Monitoring and rehabilitation: SI Systems monitor the patient's condition in real time and analyze the results during the rehabilitation process.

2. Applications and practical examples

* Alzheimer's disease: artificial intelligence analyzes images to detect pathological changes in the brain and assess the likelihood of the disease.

* Epilepsy: EEG signals can be analyzed using SI to predict and prevent the risk of seizures.

* Stroke: circulatory disorders are diagnosed at an early stage through computer vision technologies. Applications and practical examples

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* Stroke: circulatory disorders are diagnosed at an early stage through computer vision technologies.

• Robotic therapy: SI-controlled devices work interactively with patients and support rehabilitation.

3. Advantages

• Accuracy and speed increase in diagnosis

* Reduces the workload of doctors

* Reduced human factor-related errors

• Large database analysis is available

4. Problems and limitations

• AI-based systems need high quality and large number of data

* Privacy and information security issues

* Readiness of medical personnel to work with new technologies

5. Future prospects

In the future, SI will develop in such areas as early detection of more complex diseases, analysis of the cognitive potential of patients, the creation of fully automated diagnostic systems. AI-based systems need high quality and large number of data

* Pri.Conclusion In the field of Neurology, the use of artificial intelligence not only increases the quality of diagnostics and treatment, but also forms new approaches in the entire medical system. SI tools make it possible to make the activities of doctors more effective, to conduct a deeper analysis of the patient's condition and to treat it on the basis of an individual approach. However, for the effective use of these technologies, it is important

to solve problems in the scientific, technological and ethical aspects.

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