MACHINE LEARNING ALGORITHMS OF BRAIN MAGNETIC IMAGESMETHODS OF INCREASE EFFICIENCY

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Anotatsiya: *Maqolada miya magnetik tasvirlarini mashina o'rganishi algoritmlarining samaradorligini oshirish usullarini aniqlash, , insultning alomatlari va diagnostikasi bo'yicha maqola insult diagnostikasining turli jihatlari, jumladan, uning belgilari, diagnostika vositalari va insultni boshqa holatlardan farqlashdagi qiyinchiliklarni har tomonlama ko'rib chiqishga qaratilgan.*

Аннотация: *В статье, определяющей пути повышения эффективности алгоритмов машинного обучения для магнитных изображений мозга, статья о симптомах и диагностике инсульта посвящена всестороннему обзору различных аспектов диагностики инсульта, включая его симптомы, диагностические инструменты и трудности. в дифференциации инсульта от других состояний.*

Annotation: *In the article, identifying ways to improve the effectiveness of machine learning algorithms for brain magnetic images, the article on the symptoms and diagnosis of stroke focuses on a comprehensive review of various aspects of stroke diagnosis, including its symptoms, diagnostic tools, and the difficulties in differentiating stroke from other conditions.*

Keywords:*Ischemic stroke, Hemorrhagic stroke Computed tomography and Magnetic resonance imaging.*

Identifying ways to improve the effectiveness of machine learning algorithms for brain magnetic images and diagnosis of stroke symptoms may include:

1. Stroke Symptoms: These include the various symptoms of a stroke, including sudden numbness or weakness of the face, arms, or legs, difficulty speaking or understanding speech, sudden severe headache, and loss of vision, or can learn double vision. They can learn how symptoms vary depending on the type and location of a stroke and how to distinguish a stroke from other conditions that mimic its symptoms.

2. Stroke diagnosis: This may include various diagnostic tools and techniques used to detect and confirm the presence of a stroke, such as brain imaging (CT or MRI), blood tests, and neurological tests. He can explore the strengths and limitations of each diagnostic method and the challenges of making an accurate and timely diagnosis of stroke.

3. Mimicking a stroke: This can study various conditions that can mimic the symptoms of a stroke, such as seizures, migraines, and hypoglycemia. He may explore the difficulties in differentiating stroke from these conditions and the diagnostic tools and techniques used to rule out stroke in such cases.

4. Time is brain: This can explore the concept of "time is brain" in stroke management, emphasizing the importance of early and timely diagnosis and treatment to prevent brain damage and disability. He can learn about different stroke treatments, such as thrombolysis and mechanical thrombectomy, and when to use them.

In general, on the symptoms and diagnosis of strokethe article should focus on a comprehensive review of various aspects of stroke diagnosis, including its symptoms, diagnostic tools, and difficulties in differentiating stroke from other conditions. As such, it may contribute to stroke management and improve outcomes for individuals affected by the condition.

An article on magnetic resonance imaging (MRI) of the brain may cover the following areas:

1. Principles of MRI: This can explore the basic principles of MRI, including the use of magnetic fields and radio waves to create images of the brain. He may study the various components of an MRI system, such as magnets, gradient coils, and radiofrequency coils, and their role in image formation.

2. Types of MRI sequences: This can cover the different types of MRI sequences used to image the brain, such as T1-weighted, T2-weighted, and diffusion-weighted images. It can explore the strengths and limitations of each sequence and the information it provides about the brain.

3. MRI contrast agents: This may involve studying the use of MRI contrast agents such as gadolinium to enhance the visibility of brain structures and lesions. He may explore the different types of contrast agents available, their safety profile, and their role in diagnosis and treatment.

4. Clinical applications of MRI: This can cover the various clinical applications of MRI in brain imaging, including the diagnosis and management of stroke, brain tumors, multiple sclerosis, and other

neurological disorders. It can explore the strengths and limitations of MRI in each application and the difficulties in interpreting MRI results.

5. Advanced MRI techniques: This can explore the use of advanced MRI techniques such as functional MRI (fMRT), diffusion tensor tomography (DTI) and magnetic resonance spectroscopy (MRS) to study brain function and metabolism. It can explore the strengths and limitations of each technique and its potential to improve our understanding of brain function and disease.

Also, an article on MRI of the brain should aim to provide a comprehensive overview of the principles, techniques, and applications of MRI in brain imaging. Thus, it may contribute to the improvement of MRI-based diagnosis and treatment of neurological diseases and increase our understanding of brain function and disease.

An article on Magnetic Resonance Imaging (MRI) techniques and applications may cover the following areas:

1. Basic Principles of MRI: This can provide an overview of the basic principles of MRI, including magnetic fields, radiofrequency waves, and the use of gradients to create images of the body. He can learn the physical principles behind different MRI techniques, such as T1 and T2 weighting, and how these principles are use to create different images.

2. Advanced MRI Techniques: This may involve learning to use advanced MRI techniques such as Diffusion Tensor Imaging (DTI), Magnetic Resonance Spectroscopy (MRS) and Functional MRI (fMRT). He can explore the strengths and limitations of each technique, how it is use in clinical research, and how it can provide new insights into brain structure and function.

3. Clinical applications of MRI: This can cover various clinical applications of MRI, including neuroimaging, musculoskeletal imaging, and cardiovascular imaging. He can learn how different MRI techniques are use to diagnose and monitor disease, manage treatment options, and evaluate treatment outcomes.

4. Emerging MRI Applications: This may explore emerging applications of MRI such as MRI-guided interventions, quantitative MRI, and molecular imaging. It can explore the potential of these emerging techniques to improve disease diagnosis, guide treatments, and monitor disease progression.

5. MRI Safety: This may cover the safety aspects of MRI, including the potential risks to patients and medical staff, as well as the importance of following safety guidelines and regulations.

REFERENCES:

1. Xayitmatov O‘.T., Fayzullayev S.X va boshqalar. “Informatika va axborot texnologiyalari” – T.: TKTИ, 2005.

2. Alimov R.X, Yulchiyeva G.T, Alishov Sh.A, “ Axborot texnologiyasi va tizimlari”.Ma’ruza matnlari. T: - TDIU, 2005 y.

3. Alimov R.X, Begalov B.A., Yulchieva G.T., Alishov Sh.A. “Iqtisodiyotda axborot texnologiyalari”. O`quv q`llanma. T.: - O`YUAJN, 2005 y.