“TEXNIKA VA RAQAMLI TEXNOLOGIYALARNING AMALIYOTDA QO‘LLANILISHI VA ULARNING INNOVATSION YECHIMLARI”

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ПРАКТИЧЕСКОЕ ПРИМЕНЕНИЕ ТЕХНИЧЕСКИХ И ЦИФРОВЫХ ТЕХНОЛОГИЙ И ИХ ИННОВАЦИОННЫЕ РЕШЕНИЯ

PRACTICAL APPLICATION OF TECHNOLOGY AND DIGITAL TECHNOLOGIES AND THEIR INNOVATIVE SOLUTIONS

AUEZOV UNIVERSITY 1943

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Сеанс SPAN представляет собой связывание исходных портов (или сетей VLAN) и порта назначения.

Коммутатор копирует весь входящий и исходящий трафик порта источника (или VLAN) на порт назначения. Хотя технология анализатора коммутируемых портов может поддерживать в качестве источника трафика и несколько исходных портов в рамках одного сеанса, и всю сеть VLAN, отдельный сеанс анализатора коммутируемых портов не поддерживает обе возможности одновременно. В качестве портов источника можно настроить порты второго и третьего уровня.

При настройке SPAN необходимо учитывать три важных момента.

Порт назначения не может быть портом источника, а порт источника не может быть портом назначения.

Допустимое количество портов назначения зависит от платформы. Некоторые платформы поддерживают несколько портов назначения.

Порт назначения перестает быть обычным коммутационным портом. Через этот порт проходит только контролируемый трафик.

Функция SPAN считается локальной, если все контролируемые порты расположены на том же коммутаторе, что и порт назначения. Эта функция противоположна удаленной функции SPAN (RSPAN).

Использованная литература

1. Khusanova M. K. Network security and monitoring //Research Focus. – 2022. – Т. 1. – №. 4. – С. 177-183.
2. Khusanova M. K. Analysis of discrete convolution in the Matlab program//Scientific progress. – 2021. – Т. 2. – №. 4. – С. 1023-1028

HANDWRITTEN DIGIT RECOGNITION IN MACHINE LEARNING

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Introduction. Handwritten digital recognition is an area of machine learning that involves training algorithms to identify and interpret handwritten text. This

technology has numerous applications in fields such as banking, finance, and healthcare. In this article, we will explore the current state of handwritten digital recognition technology and the challenges that must be overcome to improve its accuracy.

Method. This article provides an overview of the current state of the art in handwritten digital recognition and the challenges associated with this field. We discuss the highly variable nature of handwriting, the need for large, high-quality datasets of labeled handwriting samples, and the techniques being explored to generate synthetic handwriting data and incorporate contextual information into machine learning algorithms. We also highlight the numerous applications of handwritten digital recognition in various fields.

Results. The variability of handwriting poses a major challenge to recognition algorithms. Different people have different writing styles, and handwriting can vary even for the same person depending on factors such as pen pressure, writing surface, and writing speed. Deep learning techniques such as CNNs and RNNs have been shown to be effective in addressing this variability. CNNs are particularly effective at recognizing individual characters and subcomponents of characters, while RNNs are useful for recognizing sequences of characters and words.

However, the lack of large, high-quality datasets of labelled handwriting samples is a major challenge. Creating such datasets is time-consuming and expensive, and requires highly trained experts to accurately label the samples. To address this challenge, researchers are exploring techniques for generating synthetic handwriting data. One such technique involves using generative adversarial networks (GANs) to generate realistic handwriting samples.

Incorporating contextual information into machine learning algorithms is another challenge in handwritten digital recognition. For example, recognizing a single character in isolation is relatively easy, but recognizing the same character within a word can be more challenging due to the influence of adjacent characters.

Techniques such as attention mechanisms and language models have been developed to address this challenge.

Applications of handwritten digital recognition include automated check processing in banking, medical record keeping in healthcare, and handwriting analysis in forensic science. The accuracy and effectiveness of handwritten digital recognition algorithms are likely to continue improving with advances in deep learning techniques and the development of large, high-quality datasets of labeled handwriting samples.

Conclusion. Handwritten digital recognition is a challenging problem in machine learning, but with continued advances in deep learning techniques and the development of large, high-quality datasets of labelled handwriting samples, the accuracy and effectiveness of these algorithms are likely to continue improving. Handwritten digital recognition has numerous applications in various fields, including banking, finance, healthcare, and education, and is expected to play an increasingly important role in these areas.

References

1. Elmurod Kodirov. "Application of machine learning techniques forecasting the movement of utility indexes". Engineering problems and innovations.(2023) 64-66.
2. Kodirov, E., Muxammadjonov, X., & Turgunov, B. (2019). Industrial" Internet of things": The basis of digital transformation. Теориуа и практика современной науки, (9), 3-5.
3. А. Хакимов. Методика оценки эффективности внедрения erpсистем автоматизации на предприятии// TATU FF Respublika ilmiy-texnika anjumani -2022 //c- 525-529
4. Xamidov Elnur Khamidovich, Xodjimatov Jahongir Murodovich, 2022/4/2, International Journal of Innovative Analyses and Emerging Technology, 69-74 Mirzapo'latovich, E. O., & Mavlonjonovich, M. M. (2022). Automatic system for monitoring and recording the chemical composition of water media. Web of Scientist: International Scientific Research Journal, 3(10), 691-694.
5. Khoitkulov, A. A., & Pulatov, G. G. (2022). Development of organizational and economic mechanisms to increase the capacity of textile enterprises. Gospodarka i Innowacje., 23, 142-145.