#### PROBLEMS AND SOLUTIONS AT THE STAGE OF INNOVATIVE DEVELOPMENT OF SCIENCE, EDUCATION AND TECHNOLOGY. International online conference.

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# ADVANTAGES OF USING RNN IN VOCABULARY EXPANSION

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Expanding vocabulary is a crucial aspect of language learning. The development of artificial intelligence has introduced new innovative methods into this process. In particular, the use of recurrent neural network (RNN) models provides language learners with an efficient and individualized approach. This article analyzes the advantages of using RNN for vocabulary expansion.

# **RNN and Its Role in Language Learning**

Recurrent neural networks are widely used in the field of natural language processing (NLP). They play a significant role in understanding text, translation, text generation, and the development of personalized learning systems. The key feature of RNN is its ability to process sequential data and retain context.

# Advantages of RNN in Vocabulary Expansion

# 1. Understanding Context

RNN models help understand the overall logical connections in a text. This enables learners to correctly comprehend and use new words in context.

### 2. Personalized Learning

Language learning systems built on RNN analyze the learner's proficiency level and provide an individualized approach, enhancing the effectiveness of learning.

### 3. Self-Learning Process

RNN models automatically suggest new words and phrases, allowing users to naturally expand their vocabulary.

### 4. Ability to Understand and Translate Languages

Neural networks are widely used in translation systems, helping learners understand new words and grasp their meanings.

### 5. Practical Exercises through Text Generation

RNN-based text generation systems enable learners to observe how new words are used in sentences, improving their language proficiency.

The use of recurrent neural network (RNN) models provides effective results in vocabulary expansion. With the advantages of understanding context, personalized learning, and automated language acquisition, RNN models create a favorable environment for language learners. Further development of this technology can lead to even more efficient and interactive learning systems.



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