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DEEP MACHINE LEARNING IN LINGUISTICS

Classical machine learning (ML) and deep machine learning (DL) are two different approaches to processing linguistic data. Classical machine learning is suitable for tasks that require smaller amounts of data and do not require complex models [1, 2]. It is effective for basic tasks [3, 4] such as classification or text analysis. But both of these approaches are used to solve a variety of tasks related to natural language analysis, recognition, and processing, but there are key differences between them, including model architecture, data processing, and computing resource requirements.

Deep machine learning (Deep Learning, DL) has become a powerful tool in linguistics, providing new opportunities for the analysis and processing of linguistic data [5]. With its ability to automatically learn complex patterns in large data sets

[6], deep machine learning opens up new horizons for research in linguistics, natural language processing (NLP), and cognitive linguistics.

The main applications of deep machine learning in linguistics:

1. Natural Language Processing (NLP)

- Text analysis: Deep learning allows you to automatically analyze large volumes of text data, detecting structural elements such as parts of speech, grammatical relations and semantic units. Models such as BERT (Bidirectional Encoder Representations from Transformers) and GPT (Generative Pre-trained Transformer) show impressive results in context understanding and text generation.

- Language translation: Deep learning models like Google Translate use neural networks to improve the quality of automatic translation by taking into account context and sentence structure.

2. Sentiment analysis

- Deep machine learning allows you to effectively perform sentiment analysis of texts, revealing the emotional reactions or moods of the authors. This can be useful in social media, product reviews, news articles, etc.

- The use of recurrent neural networks (RNN) and convolutional neural networks (CNN) provides high accuracy in the analysis of emotional nuances in texts.

3. Text classification

- Deep learning is used to automatically classify text data, for example, to determine the genre, topic or authorship of a text.

- Models based on neural networks can learn on large data sets and achieve high classification accuracy.

4. Text generation

- Thanks to architectures such as GPT-3, deep machine learning allows the generation of new texts based on given parameters, which can be used in literature, journalism and advertising.

- These models are able to create content that sounds natural, with style and tone in mind.

5. Analysis of language structures

- Deep learning can be used to learn complex language structures such as syntax and semantics, allowing for a better understanding of how language works.

- Application of models to study language patterns can help in the development of new linguistic theories.

6. Processing of language data

- The use of neural networks for language data processing (sound data, transcription, morphological analysis) opens up new opportunities for linguistic research.

- Automatic Speech Recognition (ASR) uses deep neural networks to convert sound to text, which is useful for phonetics and phonology research.

7. Linguistic typology and analysis

- Deep machine learning can be used to analyze different languages and their structures, helping to study linguistic diversity and language typology.

- Models can automatically classify languages according to certain features, which is useful for comparative linguistics.

8. Research of sociolinguistics

- Deep learning can help study the social aspects of language by analyzing how different social factors affect speech.

- Research may include analysis of variations in speech depending on age, gender, region, etc.

Challenges and limitations:

1. Need for large amounts of data.
2. Complexity of models.
3. Ethical issues.

Deep machine learning is distinguished by its ability to work with larger volumes of data, provide better contextual understanding of language and automatically find hidden patterns. It is more powerful for complex tasks such as translation, speech recognition, and text generation, but requires large computing resources and time to train models.

Deep machine learning has great potential for the development of linguistics and natural language processing, opening up new possibilities for the analysis, understanding and generation of linguistic data. The use of innovative approaches and technologies can help further the development of linguistic research and practice, enriching our understanding of language and communication.

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LINGUISTIC MEANS OF EXPRESSING FALSEHOOD: FROM LEXICON TO MANIPULATION

In linguistics, the concept of "falsity" is considered as a property of a statement, characterized by the inconsistency of the content of this statement with objective reality. Falsehood occurs when the statement contains information that contradicts the facts or is fictional, and at the same time the speech act does not correspond to the truth.

The French scientist J. Dupra, who studied the problem of lying, considered it to be a psycho-sociological, verbal act of suggestion, through which a person consciously attempts to "plant" either a positive or negative belief about themselves. J. Dupra, like modern researchers, believed that lying as a verbal act could exert persuasive influence, including through non-verbal communication [1].

V. Stern holds an intermediate position, defining lying as a deliberately false statement, a tool used to mislead others to achieve one's goals. The scholar suggests