

Theme of graduate qualification work: «Comparative analysis of linguistic algorithms in machine translation systems».

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The relevance of the research topic. A comparative analysis of linguistic algorithms in machine translation systems (MTS) is one of the main methods to assess the effectiveness of such systems in the practical application of a translator, which evidences the prospects for the development of the mentioned linguistics branch. Currently, there is no single system to evaluate the MTS effectiveness and quality of the translation. This study attempts to solve this problem by conducting a comparative analysis of the effectiveness of modern machine translation systems through the evaluation of linguistic algorithms.

Aim: a comparative investigation of linguistic algorithms in machine translation systems.

Objectives of the work:

1. To consider translation as a linguistic phenomenon.
2. To analyze the present state of machine translation systems.
3. To investigate the typology and classification of modern machine translation systems.
4. To identify the role and importance of machine translation systems among other linguistic processors.
5. To analyze modern methods for evaluating linguistic algorithms in machine translation systems.
6. To analyze linguistic algorithms in machine translation systems.
7. To evaluate the effectiveness of linguistic algorithms in machine translation systems.

The theoretical significance of the work is associated with the probability of identifying the linguistic features of modern machine translation methods for their subsequent refinement.

The practical significance of the study is associated with the importance of the comparative study of linguistic algorithms results that are included in this paper. They will allow choosing the most effective machine translation systems for a specialist-translator using them since linguistic algorithms are evaluated in terms of assessing the machine translation system's overall productivity. Based on the results obtained in the work, potential users will be able to understand the possibilities of using different MTS, the possible quality of the original text material translation, the advantages and disadvantages of specific MTS.

Results of the study. As a result of MTS linguistic algorithms comparative analysis, the study derived linguistic algorithms typical errors that are inherent in modern machine translation systems. The identified errors of the MTS linguistic algorithms can be classified into several categories: errors in automatic analysis that occur at the vocabulary, morphology, syntax, and at the semantic levels; errors of automatic synthesis that occur at the semantic, morphology, syntax, vocabulary levels.

The vast majority of modern MTS analyzed in the study (PROMT, Google, Yandex, Reverso, Microsoft Translator, Free Translation, Abby Lingvo Live) are based on the principle of translational correspondences.

As a result of a typological study of the translation correspondence model, arose the need to create an expanded classification of translation correspondences. The proposed translational correspondences typology based on the MTS linguistic application allows us to widely consider the problem of errors in the MT systems operation and can be used to create new systems based on the application of the principle of parallel texts.

The modern MTS practical classification, based on taking extra linguistic factors and the quality of translations made by these systems into account, makes it possible to give an impression of the effectiveness and functional capabilities of

each system. The indicated MTS gradation is of practical value when choosing a specific MT system.

Recommendations: The study results can be useful in teaching theoretical courses and practical classes in disciplines such as “Linguistics”, “Practical Grammar” and “Stylistics” of the English language, as well as in translation activities.