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(57) Abstract :

The multilingual processing system (100) represents an advanced solution integrated into an artificial intelligence (AI) system, designed to proficiently process text in multiple languages. The system comprises a language identification module (102) responsible for accurately identifying the language of an input text. Subsequently, the language-specific preprocessing module (104) arranges the input text by applying language-specific rules, tokenization techniques, and normalization processes, ensuring compatibility with subsequent processing steps. A language model selection module (106) helps to choose a suitable language model for further analysis based on the identified language, considering language characteristics and performance metrics. The system then employs a language-specific processing module (108) that applies a range of Natural Language Processing (NLP) tasks tailored to the linguistic attributes of the language, such as entity recognition, sentiment analysis, part-of-speech tagging, machine translation, and summarization. Finally, an output generation module (110) provides output aligned with the identified language, encompassing translated text, sentiment scores, extracted entities, summaries, or other pertinent information.

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