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## Patent Search

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#### Abstract:

The invention presents a novel framework for identifying and analysing plagiarism in digital content, employing advanced deep learning algorithms, artificial neural networks, and natural language processing techniques. Capable of analysing various forms of content including text, audio, visual, and multimedia, the framework detects instances of plagiarism in real time. Beyond mere detection, it categorizes and analyses the types of plagiarism involved, understanding subtle nuances like paraphrasing and idea plagiarism. The real-time component enables immediate detection and response, making it valuable in scenarios like live broadcasting and online education. Additionally, the system's comprehensive reporting and analysis features, is adaptable to different languages and data formats, and can be integrated with existing platforms across various devices. The invention represents a significant advancement in content analysis and intellectual property protection, providing a nuanced and real-time approach to plagiarism detection in the digital age.

#### Complete Specification

Description: The present invention relates generally to the area of computational linguistics, information retrieval, and machine learning. More specifically, the invention pertains to a Deep Learning-Based Framework for Real-Time Plagiarism Identification and Analysis in Digital Content.

Background of the invention:

In the modern age of digitalization, the creation and dissemination of content across various platforms have become widespread and easy to access. As a result, the copying or mimicking someone else's work without proper attribution, commonly known as plagiarism, has become a pervasive issue in numerous fields, including academia, journalism, arts, and business. Traditional methods of plagiarism detection, such as manual review or simple keyword matching, have proven inadequate due to their time-consuming, and error-prone.

In an environment where content is constantly created and shared, the existing systems' inability to accurately detect and analyze plagiarism in real time has created significant challenges in maintaining academic integrity, preserving intellectual property rights, and upholding ethical standards in professional practices. The shortcomings of the existing technologies are related to their limited scope, lack of scalability, inefficiency in handling large-scale data, and the constraints in detecting complex forms of plagiarism, such as paraphrasing or idea plagiarism.

The rapid advancement of machine learning, particularly deep learning, has offered a promising avenue to address these challenges. Deep learning algorithms have shown their prowess in understanding complex patterns and relationships within data, providing a solid foundation for a system capable of detecting plagiarism in a more nuanced and efficient manner.

The integration of natural language processing techniques has further empowered the capability to analyze text content, understand semantic relationships, and re-

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