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(57) Abstract :
Disclosed herein is a comprehensive review system for enhancing the performance, safety, and evaluation of large language models (LLMs) (100) comprises a voice data acquisition module (102) collects structured and unstructured evaluation data from multiple LLMs. A comparative analysis engine (104) evaluates models across architectural types, while a domain-wise benchmarking module (106) assesses performance across applications. A feature extraction and tokenizer assessment module (108) analyzes tokenization strategies. An emergent capability identification module (110) detects new LLM behaviors. An ethical and safety evaluation framework (112) includes multilingual prompt injection detection, hallucination analysis, and context-aware safety checks. A standardized evaluation pipeline (114) integrates benchmarking tools. A visualization engine (116) generates graphical insights. Finally, a feedback-augmented optimization and deployment module (118) recommends improvements based on failure analysis, prompt engineering, and safety gaps in multilingual and task-specific contexts.

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