

Language Model

- Clinical feasibility of AI Doctors: Evaluating the replacement potential of large language models in outpatient settings for central nervous system tumors
 - Reshaping neurosurgical training: a novel simulation-based concept for structured skill acquisition and curriculum integration
 - The sulcal patterns of the occipito-temporal and anterior cingulate cortices influence reading and writing in children and adults
 - Role for Left Dorsomedial Prefrontal Cortex in Self-Generated, but not Externally Cued, Language Production
 - Automated feature learning and survival prognostication in grade 4 glioma using supervised machine learning models
 - Dynamic Causal Tractography Analysis of Auditory Descriptive Naming: An Intracranial Study of 106 Patients
 - Do LLMs Have 'the Eye' for MRI? Evaluating GPT-4o, Grok, and Gemini on Brain MRI Performance: First Evaluation of Grok in Medical Imaging and a Comparative Analysis
 - Knowledge Graph-Enhanced Deep Learning Model (H-SYSTEM) for Hypertensive Intracerebral Hemorrhage: Model Development and Validation
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A **language model** is a computational system designed to understand, generate, and manipulate text in a coherent and contextually appropriate manner. It is trained on large datasets of text to identify patterns, structures, and meanings in human language. Advanced examples include **ChatGPT**, **GPT-4**, and similar models based on deep learning techniques.

Applications of Language Models

- **Text Generation:**
 1. [Summary](#) of [documents](#).
 2. [Content](#) creation.
 3. Answering [questions](#).
- **Machine Translation:**
 1. Translating [text](#) between multiple languages.
- **Clinical and Scientific Processing:**
 1. Analyzing [medical data](#).
 2. Drafting [reports](#) or [scientific articles](#).
- **Virtual Assistants:**
 1. Automating customer support.
 2. Assisting with [administrative tasks](#).
- **Education and Training:**
 1. Personalized tutoring.
 2. Generating examples and explanations.
- **Coding and Debugging:**
 1. Assisting with programming tasks, including code generation and debugging.
- **Research and Analysis:**
 1. Identifying trends in large text datasets.

Benefits for a Neurosurgeon

- **Research Assistance:**
 1. Quick access to relevant medical literature.
 2. Summarizing complex scientific articles.
- **Medical Education:**
 1. Generating customized educational materials for students or patients.
- **Clinical Decision Support:**
 1. Proposing protocols based on medical literature.
 2. Identifying potential diagnoses from clinical text.
- **Administrative Task Automation:**
 1. Drafting surgical or follow-up reports.
- **Enhanced Communication:**
 1. Translating and drafting documents in multiple languages.

Large Language Model

[Large Language Model](#).

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Last update: **2025/02/12 10:03**

