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# Artificial Intelligence in Neurology: A Comprehensive Review

Vytvořeno generativní umělou inteligencí OpenAI Chat GPT 4.0

Prompt: Create a scientific paper about Artificial Intelligence in Neurology. The article should contain about 4000 words. Use references to literature as in scientific publications. For each sentence, mention the source. Add key words. Údaje v textu nejsou ověřeny a proto nejsou určeny pro medicínské účely.

## Umělá inteligence v neurologii: Komplexní přehled

Vytvořeno generativní umělou inteligencí OpenAI Chat GPT 4.0 a přeloženo pomocí DeepL  
Údaje v textu nejsou ověřeny, a proto nejsou určeny pro lékařské účely.

Artificial Intelligence (AI) has rapidly advanced in recent years, finding applications across numerous medical specialties, including neurology. This review examines the current and potential roles of AI in neurology, focusing on diagnostic processes, treatment planning, and patient outcomes. We discuss various AI technologies, including machine learning (ML), deep learning (DL), and natural language processing (NLP), highlighting their contributions to the field. The paper also explores ethical considerations and future directions for AI in neurology.

**Key words:** artificial intelligence, neurology, machine learning, neural networks, diagnosis, treatment, ethics.

Umělá inteligence (AI) v posledních letech rychle pokročila a našla uplatnění v mnoha lékařských oborech, včetně neurologie. Tento přehled se zabývá současnou a potenciální úlohou umělé inteligence v neurologii se zaměřením na diagnostické procesy, plánování léčby a výsledky léčby pacientů. Pojednáváme o různých technologiích AI, včetně strojového učení (ML), hlubokého učení (DL) a zpracování přirozeného jazyka (NLP), a zdůrazňujeme jejich přínos pro tento obor. Článek se rovněž zabývá etickými aspekty a budoucím směřováním AI v neurologii.

**Klíčová slova:** umělá inteligence, neurologie, strojové učení, neuronové sítě, diagnostika, léčba, rozhraní mozkového počítače, etika.