

# AI in Neuroscience: Decoding the Brain at Scale

Machine learning is transforming how we read brain signals, diagnose disorders and personalize care — with major implications for African healthcare.

## AI meets the brain

AI models can now analyze EEG, MRI and behavioral data faster and often more accurately than traditional methods — detecting seizures, predicting stroke risk and identifying early signs of neurodegeneration.

## Why Africa stands to benefit

AI-powered tools can extend specialist expertise to under-served regions. A single trained radiologist's pattern-recognition can be encoded into software that supports thousands of clinics.

## The cautious path forward

AI must be trained on diverse datasets that include African populations. Otherwise, models risk underperforming for the very communities they aim to serve.

## Key takeaways

- AI dramatically accelerates brain data analysis
- AI-assisted diagnostics can extend specialist care
- African data inclusion is essential for fair AI
- AI augments — does not replace — clinical judgment

## Africa focus

African-built AI tools trained on African datasets are essential to closing diagnostic and care gaps responsibly.