neurophet

Personalized tES Treatment

tDCS/tACS Simulation Software tES LAB

This version includes simulating electric field strength with stroke-affected region segmentation feature.

Neurophet tES LAB is a complete, powerful tES simulation software

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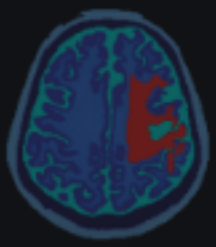
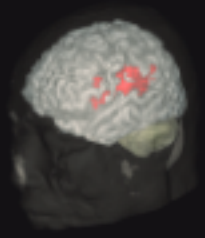
Fully Automated Brain MRI Segmentation Including Stroke-affected Region

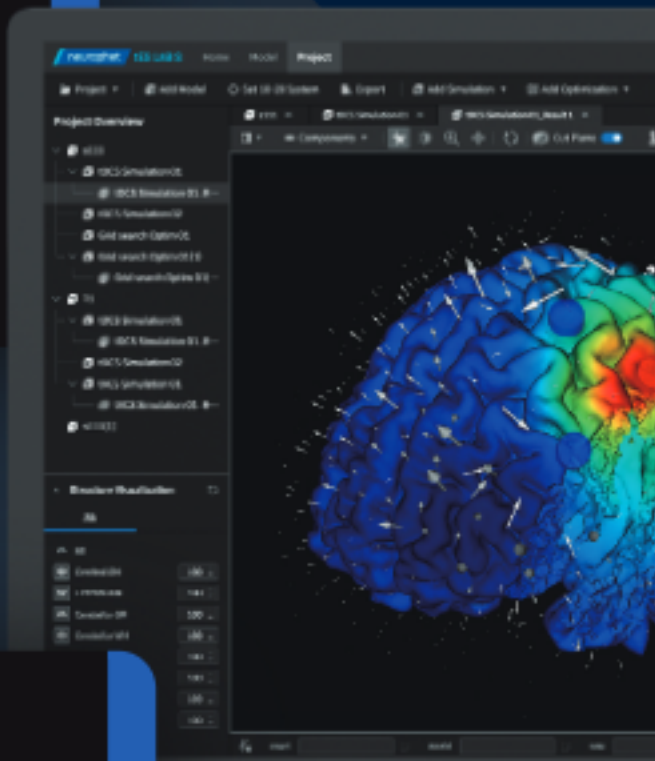


Deep learning-based Neurophet's technique segments skin, skull, CSF, white matter, grey matter, and even stroke-affected region using MRI.

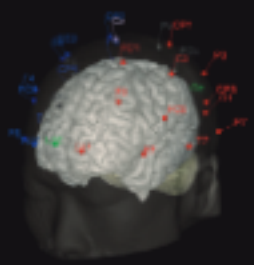
Personalized Brain Modeling



An automated modeling algorithm generates a 3D brain model based on segmented tissue layers considering an individual's anatomical structures.

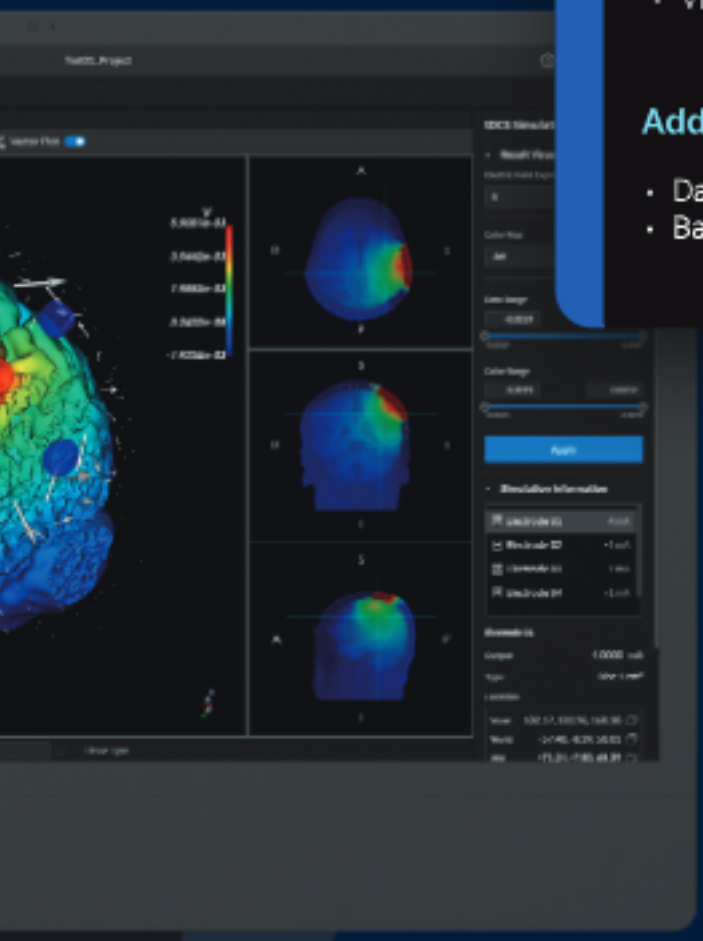


Fully Compatible with tES Parameters



- Customizable electrodes configuration (shape, size, number, and position of electrode)
- Electrode positioning system (10-20/10/5 EEG positioning system)

ws you to simulate and analyze
uced electric fields in a
lized brain model using MRI.



A Powerful tES Simulation Framework

The high-speed simulation feature calculates tDCS/tACS-induced electric field in the brain for advanced analysis and treatment planning.

- Easy, intuitive graphic user interface (GUI)
- The state-of-the-art visualization and analysis features (3D surface/cut-plane and ROI-based analysis)
- Electric field optimization features (single/multi-channel tES optimization)
- Visual guidance for accurate electrode positioning

Additional Convenient Features

- Data export: segmentation label, 3D model, stimulation results
- Batch-processing for group data analysis

Neurophet also provides TMS LAB

for Personalized Transcranial Magnetic Stimulation Simulation and Planning

- Simulation & analysis for TMS-induced electric fields
- Optimization of a coil's position & orientation
- Interoperability with TMS Navigation*

*an upcoming function

neurophet tES LAB

202301

Specification

Supported MRI data format

Image format	NIfTI - 1 (file extension : .nii)
Type	Structural MRI (T1-weighted)
Slice thickness (Spacing)	Coronal ≤ 1.0 mm Sagittal ≤ 1.0 mm Axial ≤ 1.6 mm
Field Strength (Tesla)	1.5T 3.0T

Validated devices and protocols of MRI

Company	Model	Protocol
GE	Signa HDxt 1.5T	SPGR
Philips	Intera 1.5T	VPRAGE
	Intera 3T Ingenia 3T	TFE
Siemens	Skyra 3T Verio 3T	VPRAGE

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