Resource Summary Report

Generated by T1D on Aug 4, 2026

CleanLine

RRID:SCR_002233
Type: Tool

Proper Citation

CleanLine (RRID:SCR_002233)

Resource Information

URL: http://www.nitrc.org/projects/cleanline/

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Description: An EEGLAB plugin which adaptively estimates and removes sinusoidal artifacts from independent component analysis (ICA) components or scalp channels using a frequency-domain (multi-taper) regression technique with a Thompson F-statistic for identifying significant sinusoidal artifacts. This approach has been advocated by Partha Mitra and Hemant Bokil (Observed Brain Dynamics, Chapter 7.3.4., 2007) and CleanLine utilizes modified routines from the Mitra Lab's Chronux Toolbox (www.chronux.org). Sinusoidal noise can be a prominent artifact in recorded electrophysiological data. This can stem from AC power line fluctuations (e.g. 50/60 Hz line noise + harmonics), power suppliers (e.g. in medical equipment), fluorescent lights, etc. Notch filtering is generally undesirable due to creation of band-holes, and significant distortion of frequencies around the notch frequency (as well as phase distortion at other frequencies and Gibbs rippling in the time-domain).

Abbreviations: CleanLine

Resource Type: software resource

Keywords: eeg, meg, electrocorticography, spectral analysis, temporal transformation

Availability: GNU General Public License

Resource Name: CleanLine

Resource ID: SCR_002233

Alternate IDs: nlx_155529

Record Creation Time: 20220129T080212+0000

Record Last Update: 20260801T190208+0000

Ratings and Alerts

No rating or validation information has been found for CleanLine.

No alerts have been found for CleanLine.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 120 mentions in open access literature.

Listed below are recent publications. The full list is available at T1D .

Piskin D, et al. (2025) Cortical changes associated with an anterior cruciate ligament injury may retrograde skilled kicking in football: preliminary EEG findings. Scientific reports, 15(1), 2208.

Cupertino L, et al. (2025) Walking on the Edge: Brain Connectivity Changes in Response to Virtual Height Challenges. The European journal of neuroscience, 61(9), e70131.

Chin TI, et al. (2025) Implementation of mobile EEG for resting-state and visual evoked potentials in young children in rural Ethiopia. Frontiers in human neuroscience, 19, 1552410.

Chung H, et al. (2025) The association between infant EEG aperiodic exponent and the trajectory of restricted and repetitive behaviors for toddlers with and without autism. Journal of neurodevelopmental disorders, 17(1), 58.

Benedetto A, et al. (2025) The Speed of Visual Discrimination Differs between Foveola and Perifovea: A Combined EEG and Behavioral Investigation. eNeuro, 12(8).

Ghosh P, et al. (2025) Spatiotemporal dynamics of EEG microstate networks over the first two years of life: A multi-cohort longitudinal study. Imaging neuroscience (Cambridge, Mass.), 3.

Lin WH, et al. (2025) Neural markers of social dominance: A female-focused perspective. iScience, 28(8), 113109.

Sevilla-Garc??a M, et al. (2025) Brain power comparison between microgravity and head-down tilt bed rest: an electroencephalography approach. Scientific reports, 15(1), 42314.

Gil Avila C, et al. (2025) Assessing the balance between excitation and inhibition in chronic pain through the aperiodic component of EEG. eLife, 13.

Kelley M, et al. (2025) Spatiotemporal processing of real faces is modified by visual sensing. NeuroImage, 312, 121219.

Kranz D, et al. (2025) Altered oscillatory coupling reflects possible inhibitory interneuron dysfunction in Rett syndrome. medRxiv : the preprint server for health sciences.

Williams CL, et al. (2025) Parent attention-orienting behavior is associated with neural entropy in infancy. Infancy : the official journal of the International Society on Infant Studies, 30(1), e12595.

Ceruti C, et al. (2025) Anticipation of pain during operant learning increases cognitive performance and feedback-related cortical potentials. Experimental brain research, 243(11), 221.

Farrokhi A, et al. (2025) Exploring the Impact of Declarative Learning on the Consolidation of Acquired Motor Skills Under Valence Feedback. Human brain mapping, 46(2), e70105.

Tokimoto S, et al. (2025) Understanding implicature as an inner simulation of the speaker's context retrieval. Frontiers in human neuroscience, 19, 1568070.

Ryoo N, et al. (2025) EEG-based detection of early functional brain changes in subjective cognitive decline: a prospective cohort study. Alzheimer's research & therapy, 17(1), 265.

Brandes-Aitken A, et al. (2024) Maternal heart rate variability at 3-months postpartum is associated with maternal mental health and infant neurophysiology. Scientific reports, 14(1), 18766.

Efthimiou TN, et al. (2024) Zygomaticus activation through facial neuromuscular electrical stimulation (fNMES) induces happiness perception in ambiguous facial expressions and affects neural correlates of face processing. Social cognitive and affective neuroscience, 19(1).

Kim JS, et al. (2024) Resting-state EEG microstate analysis of internet gaming disorder and alcohol use disorder. Dialogues in clinical neuroscience, 26(1), 89.

Mazzeo A, et al. (2024) Resting-state electroencephalography microstates as a marker of photosensitivity in juvenile myoclonic epilepsy. Brain communications, 6(2), fcae054.