open to
clinician scientists,
PhDs & early career
researchers
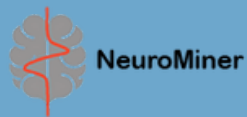–
suitable for different
levels of machine
learning experience

Course structure

| Seminars & Expert Lectures 7-11 Oct 2024 online | Hands-on NeuroMiner Tutorials 7-11 Oct 2024 online | Advanced Methods & Data-Specific Advice 4-5 Nov 2024 online |

NeuroMiner

supported by the machine
learning platform NeuroMiner

LMU KLINIKUM DER UNIVERSITÄT MÜNCHEN

Max Planck Institute of Psychiatry

AIM

ecnp

Neuroimaging ECNP Network

KING'S College LONDON

REGISTRATION

Website & registration

https://neurominer-git.github.io/NeuroMiner_1.2/0.1_2024_MLSchool.html

Fees

Lectures only: free
NeuroMiner practicals: 260 €
Advanced Days: +240 €

Contact

Section for Precision Psychiatry,
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Clara Vetter
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Paris Lalousis
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ONLINE MACHINE LEARNING SCHOOL

07-11 Oct 2024
Virtual event

Machine Learning for Clinical Neuroscientists

ORGANIZED BY
NIKOLAOS KOUTSOULERIS & HIS TEAMS AT LMU MUNICH & KING'S COLLEGE LONDON

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EXPERT SPEAKERS

Nikolaos Koutsouleris
LMU Munich, Germany &
King's College London, UK

Carmen Peláez-Moreno
University Carlos III of Madrid, Spain

Dominic Dwyer
University of Melbourne, Australia

Klaas Enno Stephan
ETH Zürich, Switzerland

Paris Lalousis
King's College London, UK

Stefan Feuerriegel
LMU Munich, Germany

Ariane Wiegand
LMU Munich, Germany

More TBA

AGENDA MAIN COURSE
7-11 OCT

Day 1
- Topic: Introduction to machine learning concepts and tools (Nikolaos Koutsouleris)
- NeuroMiner tutorial: Cross-validation & preprocessing
- Expert lecture: Biases in Machine Learning (Carmen Peláez-Moreno)

Day 2
- Topic: Machine Learning algorithms & optimization (Dominic Dwyer)
- NeuroMiner tutorial: Algorithms and optimization
- Expert lecture: Translational Neuromodeling and Computational Psychiatry (Klaas Enno Stephan)

Day 3
- Topic: Multi-site data correction & multi-modal data analysis (Paris Lalousis)
- NeuroMiner tutorial: Data correction and stacked generalization
- Expert lecture: Artificial Intelligence (AI) in Management (Stefan Feuerriegel)

Day 4
- Topic: Transparent & interpretable machine learning (Ariane Wiegand)
- NeuroMiner tutorial: Interpretable machine learning
- Extra NeuroMIner tutorial: Multi-group classification
- Round Table Discussion with Guest Experts (TBA): Translational Challenges of AI in Mental Healthcare

Day 5
- Kaggle competition

NEW

DATA DEEP DIVES DAYS
4-5 NOV
ADDITIONAL COST: 240€

Use your own data!

- Get individual advice targeted to your research question and your data
- Topics covered: Data-modality specific preprocessing pipelines, model evaluation, analysis design, parallelized NeuroMiner employment
- Tutor-to-student ratio max. 1:2
- Advice & feedback on analysis design choices with Prof. Koutsouleris