

(+43) 6886-4430826
Salzburg, Austria
Egyptian
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Mohamed Ameen

Neuroscientist | Data Scientist | Sleep Expert

website
github repo
linkedin

PhD-trained neuroscientist and data scientist with around 10 years of experience analyzing complex biomedical and sleep data and developing scalable pipelines. Expert in Python-based analysis of EEG, cardiac, and sensor signals. Experienced in algorithm development, model validation, and translating insights into actionable digital health solutions. Proven track record of leading cross-functional projects and translating data into health-related insights.

SKILLS

Technical Skills	Python, R, MATLAB, SQL, Git, LaTeX
Machine Learning	(Un)Supervised Learning (Scikit-Learn), Deep Learning (PyTorch), Model training & Validation
Cloud Computing	Google Colab, AWS (expanding), Data pipelines, Workflow automation
Data Analysis	Statistical modeling, Regression analyses, Multilevel modeling, Time-series analysis
Domain Expertise	Sleep science, M/EEG, fMRI, HRV, Biosensors, Digital Health, Sleep disorder detection
Languages	Arabic (native), English (fluent), German (B2), French (basic)

TECHNICAL EXPERIENCE

Research Scientist / R&D **11 2025 — Present**
The Siesta Group GmbH *Vienna, Austria*

- Developing physiological biomarkers to enhance early identification of subclinical sleep apnea and support clinical decision-making.
- Applying advanced machine learning to generate interpretable insights into sleep physiology and inform data-driven healthcare decisions.

Senior Scientist / Center for Cognitive Neuroscience Salzburg **04 2024 — 10 2025**
Salzburg University *Salzburg, Austria*

- Guided junior researchers and team members in complex ML and signal processing projects.
- Developed automated ML pipelines for data analysis, reducing analysis time by 25% and supporting downstream validation.
- Built reproducible, well-documented workflows to streamline data management and ensure efficient knowledge transfer.

Visiting scholar / Department of Biomedical Engineering **10 2022 — 02 2023**
Columbia University in the City of New York *New York, USA*

- Built end-to-end pipelines combining computational modeling, simulations, and ML for neural signal analysis.
- Published open-source neural data analysis frameworks on GitHub, adopted by multiple research projects.

PhD Researcher (including Predoctoral RA) / Lab for Sleep and Consciousness research **03 2017 — 03 2024**
Salzburg University *Salzburg, Austria*

- Designed and validated scalable pipelines for EEG, fMRI, EOG, ECG, and actigraphy datasets.
- Developed ML-based feature extraction and classification algorithms for sleep and cognitive biomarkers.
- Performed data analyses supporting regulatory and clinical validation of sleep monitoring algorithms (65+ citations)
- Led multi-site international collaborations; resulting in 3 publications.
- Secured €160k in PhD and postdoctoral funding.

Data Scientist / Digital Health R&D **03 2019 — 08 2019**
Proschlaf GmbH *Salzburg, Austria*

- Evaluated performance of a biometric sleep monitoring device, informing diagnostics strategy and product improvement.
- Delivered data analysis reports to R&D stakeholders, influencing product development roadmap.

Earlier roles

- Senior pharmacist**, Oversaw daily operations and patients' treatment plans. **S.A.T pharmacies, EG.** 10 2016 - 02 2017
- RA**, Analyzed neuroimaging data on cognition and sleep. **University of Cambridge, UK.** 02 2016 - 07 2016
- RA**, Identified structural brain alterations in epilepsy patients. **University Clinic Freiburg, DE.** 09 2015 - 01 2016

EDUCATION

PhD in Cognitive Neuroscience - University of Salzburg, Austria 2024
MSc in Neuroscience - University of Strasbourg, France 2016
BSc in Pharmacy - Cairo University, Egypt | *Recognized as equivalent to B.Sc of Pharmacy by the University of Vienna, Austria* 2013

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SELECTED PUBLICATIONS

(Full list available [here](#))

- Non-linear Development of Auditory Neural Responses During the First Year of Life. *BioRxiv*, Senior author 2026
 - Temporally resolved analyses of aperiodic features track neural dynamics during sleep. *Nat. Comm. Psy.*, 1st author 2025
 - Selective preservation of prediction-related signals in human sleep. *Curr. Biol.*, co-author 2025
 - The Brain Selectively Tunes to Unfamiliar Voices during Sleep. *JNeurosci*, 1st author 2022
 - About the Accuracy and Problems of Consumer Devices in the Assessment of Sleep. *Sensors*, 1st author 2019
- Conference papers:
- On the Reliability of Consumer Devices for the Assessment of Sleep. *41st IEEE EMBC Conference*, co-author 2019

SELECTED FELLOWSHIPS & AWARDS

- (€350k) ESPRIT Fellowship – Austrian Science Funds (FWF) | Early Career Independent Research Project . 2026
- (€45k) Postdoctoral Fellowship – Salzburg University | Early Career Independent Researcher. 2024
- (€6k) Young Investigator Award – German Sleep Society (DGSM). 2023
- (€115k) DOC doctoral Fellowship – Austrian Academy of Sciences (ÖAW) 2019

OUTREACH

- 8 Oral Presentations and 15+ Poster Presentations at International Scientific Conferences 2017–2025
- Guest Editor, *Frontiers in Sleep* – Topic: Understanding Conscious Experience during Sleep 2024–present
- Guest Lecturer, University of Salzburg – EEG Analysis and Neuropsychology of Consciousness 2023–2024
- Guest Lecturer, EFPSA – Workshop on the Neuroscience of Dreams 2022

REFERENCES

Assoc.-Prof. Dr. Kerstin Hödlmoser, University of Salzburg

- PhD supervisor - Neuroscience, Open science, and Grants & Fellowships
- Email: kerstin.hoedlmoser@plus.ac.at

Dr. Thomas Donoghue, Columbia University in New York City

- Research collaborator in cognitive and computational neuroscience
- Email: tdonoghue.research@gmail.com

Univ.-Prof. Dr. Manuel Schabus, University of Salzburg

- Scientific collaborator in digital biomarkers and validation studies
- Email: manuel.schabus@plus.ac.at