Jolanda Malamud

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About me

Applied Computational Scientist focused on solving complex human problems. I build foundational and predictive models using advanced statistical methods and AI/ML techniques, turning complex data into clear, actionable scientific insights. I'm passionate about using technology for good, collaborating with mission-driven teams, and creating meaningful impact.

Skills

Technical Tools & Languages Python (NumPy, pandas, scikit-learn, PyTorch) • MATLAB (SPM) • Git\Github • Bash • LaTeX • R • SQL • Docker • AWS

Data Science & ML Expertise • Machine Learning (supervised, unsupervised, deep learning, reinforcement learning, large language models) • Statistical Modeling • Data Science (Preprocessing, Mining, Visualization) • Time Series Analysis • Dynamical & Control Systems • Experimental Design • Scientific Writing

Communication & Soft Skills • Fluent in English & German (Native) • Excellent organizational & interpersonal skills • Structured working style • Experience in working with interdisciplinary teams

Experience

Research and Data Scientist **Dec 2024 — Aug 2025**
TheraBuddy (Mental Health Startup) *Zurich/Remote*
- Defined data strategy, identified key metrics, and explored AI/ML techniques to lead data science projects and product innovation.
- Conducted research for the development of a gamified solution for preventative mental health care.
- Supported stakeholder communication, fundraising and strategic analysis (e.g., pitches, market fit).
- Contributed to early-stage product development and business strategy.

Affiliated Researcher **June 2023 — Sept 2024**
Applied Computational Psychiatry Lab, Mental Health Neuroscience Department, Division of Psychiatry & Max Planck UCL Centre for Computational Psychiatry and Ageing Research, Queen Square Institute of Neurology *London, UK*
- Conducted advanced statistical modeling for mental health research.
- Applied reinforcement learning and survival analyses to predict relapse in large-scale clinical trials.
- Published in peer-reviewed journals.

Postgraduate Researcher **Oct 2018 — June 2023**
Max Planck UCL Centre for Computational Psychiatry and Ageing Research *London, UK*
Supervisors: Prof Quentin Huys & Prof Ray Dolan (passed with no corrections)
- Developed and applied machine learning models to analyze mental health data.
- Modeled mood dynamics using dynamical/control systems and time series methods.
- Designed and conducted behavioral studies on psychological interventions.
- Published scientific findings and presented research at international conferences.

Graduate Researcher **Mar 2017 — Jan 2018**
Translational Neuromodeling Unit *Zurich, Switzerland*
Supervisors: Prof Klaas Enno Stephan & Prof David Paul Wolfer
- Analyzed fMRI data using Dynamic Causal Modeling (DCM) and machine learning approaches to investigate cognitive processes and mental health disorders.

Research Assistant **Nov 2015 — Nov 2016**
University Hospital Zurich, Clinic for Psychiatry and Psychotherapy *Zurich, Switzerland*
- Conducted cognitive experiments and collected physiological & fMRI data.
- Assisted in a meta-analysis and statistical evaluations of psychiatric studies.

Education

DAS in Data Science (Specialization in Machine Learning and Artificial Intelligence), *ETH Zurich* 2024 - Present
Department of Computer Science *Zurich, Switzerland*

PhD in Computational Psychiatry, *University College London* 2018 - 2023
Max Planck UCL Centre for Computational Psychiatry and Ageing Research *London, UK*

MSc in Health Science and Techonolgy with a Major in Neuroscience, *ETH Zurich* 2015 - 2018
Department of Health Sciences and Technology *Zurich, Switzerland*

BSc in Health Science and Techonolgy, *ETH Zurich* 2012 - 2015
Department of Health Sciences and Technology *Zurich, Switzerland*

Volunteering

Organizer, "Methods for Dummies" Seminar Series, UCL Nov 2021 — Jun 2022
Mentor, In2scienceUK Sept 2020 — July 2021
Postgraduate Student Representative, COMP2PSYCH Program Aug 2020 — Dec 2022

Honors and Awards

IMPRS COMP2PSYCH PhD Scholarship, issued by Max Planck Society Oct 2018 — Oct 2022

Publications

Malamud, J. and Huys, Q. (2025). Distancing alters the controllability of emotional states by affecting both intrinsic stability and extrinsic sensitivity. *eLife* 14. https://doi.org/10.7554/eLife.102780.1

Malamud, J., Lewis, G., Moutoussis, M., Duffy, L., Lewis, G., and Huys, Q. (2025). Reinforcement learning processes are associated with relapse after antidepressant discontinuation: evidence from a randomized controlled trial. *In prep.*

Malamud, J., Lewis, G., Moutoussis, M., Duffy, L., Bone, J., Srinivasan, R., et al. (2024). The selective serotonin reuptake inhibitor sertraline alters learning from aversive reinforcements in patients with depression: evidence from a randomized controlled trial. *Psychological Medicine* 1–13. doi:10.1017/S0033291724000837

Malamud, J., Guloksuz, S., van Winkel, R., Delespaul, P., De Hert, MAF., Derom, C., et al. (2024). Characterizing the dynamics, reactivity and controllability of moods in depression with a Kalman filter. *PLOS Computational Biology* 20(9). doi:10.1371/journal.pcbi.1012457

Jellestad, L., Zeffiro, T., Piccirelli, M., Malamud, J., Klimke, BBM., Rauen, K., et al. (2021). Interfering with fear memories by eye movement desensitization and reprocessing. *Int J Psychophysiol.* doi:10.1016/j.ijpsycho.2021.04.006

Jellestad, L., Vital, NA., Malamud, J., Taeymans, J., Mueller-Pfeiffer, C. (2021) Functional impairment in Posttraumatic Stress Disorder: A systematic review and meta-analysis. *J Psychiatr Res.* doi:10.1016/j.jpsychires.2021.01.039

References available upon request.