MAAIKE M.H. VAN SWIETEN

GitHub ⋄ LinkedIn ⋄ ResearchGate

EDUCATION

Ph.D. Computational (Clinical) Neuroscience – University of Oxford, United Kingdom 2020

Thesis Title: "Physiological modulation of Learning and Decision-Making"
Recipient of a Full Medical Research Council Studentship.

M.Sc. Neuroscience and Cognition - University of Utrecht, The Netherlands 2014

Experimental and Clinical Track. GPA: 4.0.
Recipient of four study grants for research internships in the United States and the Netherlands.

B.Sc. Chemistry - University of Utrecht, The Netherlands 2012

Minor in Neuroscience at University of Amsterdam.
International Exchange Student at CUHK in Hong Kong.

RESEARCH EXPERIENCE

Clinical Data Scientist – IKNL, The Netherlands Sep 2022 – present
- Led and coordinated the Data and Technology work package for a European project
- Standardised data using the Observational Medical Outcome Partnership - Common Data Model (OMOP-CDM)
- Implemented a federated learning network to ensure that data are Findable, Accessible, Interoperable and Reusable (FAIR).
- Organised two international workshops for executing complex use cases in a federated manner.

Postdoctoral researcher and data curator – University of Oslo, Norway Mar 2021 – Aug 2022
- In-depth curation of neuroscience data and associated metadata in a knowledge graph database
- Optimised curation workflows and automated data processing pipelines.
- Co-developer openMINDS metadata model (link to GitHub).
- Developed 5 tutorials, given 10+ talks at international conferences and for external stakeholders.

Doctoral & Postdoctoral Researcher – MRC BNDU, University of Oxford, UK Oct 2016 – Feb 2021
- Developed computational models to probe the influence of physiological signals on brain function.
- Employed reinforcement learning (machine learning) models and performed statistical analysis (e.g. regression).
- Designed and executed experiments to test quantitative and qualitative predictions.
- Analysed and identified trends in complex data and documented findings in written reports
- Prepared a successful research ethics document for a 3-year experimental study in human volunteers.
- Effective project management skills to allow for collaborative projects outside the scope of PhD.

Research associate – Biozentrum, University of Basel, Switzerland Dec 2014 – Aug 2016
- Prepared project proposals, designed and set-up experiments.
- Obtained and analysed electrophysiological recordings and employed optical stimulation techniques in rodents.
- Co-supervised visiting M.Sc. students and organised bi-weekly journal club meetings for 10 people.

KEY SKILLS

Software	MATLAB, Python, R studio, SPSS, LaTeX, Microsoft Office, Adobe Illustrator, GitHub.
Analytical	Data analysis/interpretation, visualisation, modelling, statistics, Good Clinical Practice (GCP), Good Laboratory Practice (GLP).
Communication	Verbal and written communication, teamwork.
Language	Dutch (native), English (native), German (advanced), French (intermediate), Spanish (beginner).

RELEVANT COURSES

- AI in Medicine: diagnosis, prognosis, and treatment, Coursera (online)   2021
- Machine Learning, Coursera (online)   2020
- The Data Science Course 2020: Complete Data Science Bootcamp, Udemy (online)   2020
- Complete Python Bootcamp, Udemy (online)   2019
- Learn to Code: introduction to Python, Oxford University, United Kingdom.   2018
- Computational and Cognitive Neuroscience Summer School, NYU Shanghai, Suzhou, China.   2018
- MATLAB Programming for Experimental Psychology, Oxford University, United Kingdom.   2016

OTHER RELEVANT EXPERIENCE

- **Member of Training Task Force Data Standards and Sharing Working Group of the International Brain Initiative** - Developed Training Resources for Cross Initiative Data-driven Modelling Workflows
- **Member of the Information Security forum and Data Access committee** – Developed and improved open access and the data storage platform.
- **Public Engagement** – Organised 5 public engagement events directed at A level students and people affected by Parkinson's Disease.

SELECTED PUBLICATIONS – 9 OF 12

- **van Swieten, M.M.H.**, Bogacz, R., Manohar, S.G. (2023). Gambling on an empty stomach: Hunger modulates preferences for learned but not described risks. *Brain and Behavior* 10(5):e2978
- Doody, M., **van Swieten, M.M.H.**, Manohar, S.G. (2022). Model-Based Learning Influences Model-Free Value. *Scientific Reports* 12(1):2358
- **van Swieten, M.M.H.**, Bogacz, R., Manohar, S.G. (2021). Hunger improves reinforcement-driven but not planned action. *Cogn. Affect. Behav. Neurosci.* 21: 1196–1206
- Grogan, J.P. Raemaekers, M., **van Swieten, M.M.H.**, Green, A.L., Gillies,M.J., Manohar, S.G.(2021). Muscarinic receptors mediate motivation via preparatory neural activity in humans. *bioRxiv 2021.07.28.454154*
- **van Swieten, M.M.H.**, Bogacz, R. (2020). Modeling the effects of motivation on choice and learning in the basal ganglia. *PLoS Comp. Biol. 16*(5), Article e1007465.
- Achterberg, E.J.M., **van Swieten, M.M.H.**, Houwing, D.J., Trezza, V., Vanderschuren, L.J.M.J. (2018). Opioid modulation of social play reward in juvenile rats. *J.Neuropharm. 159*, Article 107332.
- Achterberg, E.J.M., **van Swieten, M.M.H.**, Driel, N.V., Trezza, V., Vanderschuren, L.J.M.J. (2016). Dissociating the role of endocannabinoids in the pleasurable and motivational properties of social play behaviour in rats. *Pharmacol. Res. 110*:151-158.
- Stamatakis, A.M., **van Swieten, M.M.H.**, Basiri, M., Blair, G., Kantak, P., Stuber, G.D. (2016). Lateral hypothalamic area glutamatergic neurons and their projections to the lateral habenula regulate feeding and reward. *J. Neurosci. 36*(2):302-11 .
- **van Swieten, M.M.H.**, Pandit, R., Adan, R.A.H., van der Plasse, G. (2014). The neuroanatomical function of leptin in the hypothalamus. *J. Chem. Neuroanat. 61-62*:207-20.