Sam Gijsen

Jänickestraße 46, 14167 Berlin, Germany

(+49) 178-2100-188 | samgijsen@gmail.com | samgijsen.github.io | SamGijsen | SamGijsen

Skills

Techniques	Bayesian Statistics, Machine Learning, Reinforcement Learning, Optimisation, Hypothesis Testing, Visualisation
Languages	Python, MATLAB, JavaScript, Git
Data Science	Scikit-Learn, PyTorch, SciPy, PyMC, SQL, NumPy, Pandas, SLURM
Communication	English (Fluent), Dutch (Mother Tongue), German (Intermediate)

Education

PhD Cognitive Computational Neuroscience
Berlin, Germany

Neurocomputation and Neuroimaging Unit, Free University Berlin — *Oct. 2018 - PRESENT*

- Bayesian statistics, exploration-exploitation, reinforcement learning, information theoretic modeling
- Admission to competitive doctoral program: Berlin School of Mind and Brain
- DAAD Research Scholarship

MSc Research Master in Cognitive and Clinical Neuroscience
Maastricht, Netherlands

Maastricht University — *Oct. 2015 - Sep. 2017*

BSc Psychology
Maastricht, Netherlands

Maastricht University — *Oct. 2012 - Sep. 2015*

BSc Industrial Engineering
Eindhoven, Netherlands

Technical University Eindhoven — *Oct. 2014 - Sep. 2015*

- Promoted to second year but ended voluntarily.

Experience

Research Assistant
London, UK

King's College London, Department of Neuroimaging — *Jul. 2017 - Sep. 2018*

- Large-scale brain imaging research and analysis leading to two publications
- Project coordination and communication with scientists, radiologists, pharmacological industry, and medical staff

MSc Student Intership
London, UK

King's College London, Department of Neuroimaging — *Nov. 2016 - Jul. 2017*

- Application of multiple brain imaging techniques and analyses (fMRI, MRS, EEG)
- Independent Component Analyses to study both temporal and spatial networks of brain activity to pharmacological intervention

Research Assistant
Maastricht, Netherlands

Maastricht University — *Aug. 2016 - Nov. 2016*

- Designing, programming, and piloting experimental work using high-field MRI

Extracurricular Activity

Deep Learning Summer School
Online

Neuromatch — *Aug. 2021*

- Gained experience designing, training, and deploying deep learning models in PyTorch
- Group project implementing Q-learning (deep reinforcement learning agents)

Courses

Data Science:

- Mathemathics for Machine Learning - Coursera.com
- Statistics for Data Science - Free University, Berlin (2019)
- Computational Neuroscience - Coursera.com

Publications

Neural surprise in somatosensory Bayesian learning [link]

PLOS Computational Biology 2021, Gijsen, S, ..., Blankenburg, F

Active inference and the two-step task [link]

Scientific Reports 2022, Gijsen, S, Grundei, M, Blankenburg, M

The effect of ketamine and D-Cycloserine on the high frequency resting EEG spectrum in humans [link]

Scientific Reports 2022, Nottage, J F, ..., Gijsen, S, Mitul, M

The GPR139 agonist TAK-041 produces time-dependent alterations to cerebral blood flow and reward system function in patients with schizophrenia: a randomised placebo-controlled trial

Under Review, Hawkins, P C T, ..., Gijsen, S, ..., Laurenza, A

EEG mismatch responses in a multi-modal roving stimulus paradigm provide evidence for probabilistic inference across audition, somatosensation and vision [link]

bioRxiv Grundei, M, Gijsen, S, Blankenburg, M