

# Academic Curriculum Vitae

## Dirk Gütlin

### Studies

#### University of Osnabrück

SEPT 2019 - CURRENT

Cognitive Science (Master of Science; In progress)

#### University of Salzburg

SEPT 2016 - JUN 2019

Psychology (Bachelor of Science)

#### University Koblenz-Landau

SEPT 2015 - AUG 2016

Psychology, Mathematics

### Research Experience

#### University of Osnabrück, Institute of Cognitive Science

MAR 2020 - CURRENT

Research Assistant, Neurobiopsychology:

Application and validation of classification models for EyeTracking data recorded in Virtual Reality, RSA with EEG data.

Supervisors: Artur Czeszumski, Prof. Peter König.

#### University of Osnabrück, Institute of Cognitive Science

MAR 2020 - CURRENT

Teaching/Research Assistant, Cognitive Modelling Group:

Teaching assistance for the course 'Experimental Psychology Lab';

Programming Interactive online experiments for establishing language pragmatics in artificial agents.

Supervisor: Prof. Michael Franke.

#### Google Summer of Code Project with Stipend for Python Software Foundation/ MNE-Python

MAY 2019 - AUG 2019

Google Summer of Code Participation, submitting the project:

'MNE-Python: Improve Time Frequency Analysis in Source Space' for M/EEG data analysis software MNE-Python.

Supervisors: Alexandre Gramfort, Joan Massich, [Jean-Rémi King] (INRIA, Paris).

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### Interests

Cognitive Neuroscience  
Neuroscientific Data Analysis  
Machine Learning  
Deep Learning  
Statistics  
Complex Systems  
(Neural) Time Series

### Programming Languages

Python  
MATLAB  
R  
C#  
JavaScript/HTML (basics)

## **Centre for Cognitive Neuroscience Salzburg**

SEPT 2018 - AUG 2019

Research Assistant, Neurocognition Lab:

Development of research applications, Eye-Tracking measurements.

Supervisors: Michael Leitner, Prof. Florian Hutzler.

## **University of Salzburg, Department of Psychology**

MAR 2018 - AUG 2018

Tutor: 'MATLAB - Advanced Applications':

Neurophysiological data processing with FieldTrip, experimental Designs with Psychtoolbox.

Supervisor: Gianpaolo Demarchi.

## **Christian-Doppler-Klinik Salzburg**

DEC 2017 - SEPT 2018

Intern, Department of Neurology:

Epilepsy monitoring, EEG measurement, automated epileptic spike detection.

Supervisors: Yvonne Höller, Aljoscha Thomschewski.

## **University of Salzburg, Department of Psychology**

NOV 2017 - JUL 2018

Intern, Salzburg Brain Dynamics Lab:

MEG measurement support, MEG Data Analysis (Time-Frequency Analysis, MVPA, Speech Reconstruction using ANN).

Supervisor: Prof. Nathan Weisz.

## **Projects**

### **neuropynamics**

With Lucas Feldmann & Hunaid Hameed.

Collection of Jupyter notebooks and visualization tools for intuitive introductions into the subject of Neurodynamics.

Github Repo: <https://github.com/DiGyt/neuropynamics>

### **Salzburg Visual Field Trainer**

Bachelor Project.

Virtual Reality research application for Visual Restoration Therapy. Developed in C# with Unity, for Google Cardboard on Android.

Supervisor(s): Michael Leitner, Stefan Hawelka.

### **fieldtrip2mne**

With Thomas Hartmann.

Python Toolbox for importing MATLAB based FieldTrip data structures into MNE-Python. Integrated in MNE-Python release 0.17 as mne/io/fieldtrip.

GitLab Repo: <https://gitlab.com/obob/fieldtrip2mne>

## **pymatreader**

With Thomas Hartmann.

Python Toolbox for uniform translation of MATLAB (.mat) files into Python.

GitLab Repo: <https://gitlab.com/obob/pymatreader>

### **Publications**

Leitner, M. C., Gütlin, D. C., & Hawelka, S. (2020). *Salzburg Visual Field Trainer (SVFT): A Neuropsychological Virtual Reality Training Device for Cortical Blindness*. Manuscript in preparation.