# Clara Sophie **Vetter**

PhD Research Candidate in Neuroscience & AI

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## **Edu**cation

### University of Amsterdam
*Amsterdam, The Netherlands*

M. Sc. (Research), Psychology, graduated with Distinction, GPA: 8.52/10 (126 ECTS)    *Sep 2019 - Jul 2021*

- Major: Brain & Cognition; Minor: Behavioural Data Science
- Advanced statistics and data science courses (44 ECTS)
- Thesis: Assessing the value of individual structural brain networks for the classification of patients with schizophrenia using support-vector-machines with different (graph) kernels; supervisors: Prof. Dr. Nikolaos Koutsouleris & Dr. Dom Dwyer (LMU Munich), Dr. Henk Cremers (UvA); Grade: 8.5
- Extracurricular: Treasurer and communication lead of programme's student delegates

### Albert-Ludwig's University
*Freiburg, Germany*

B. Sc., Psychology    *Oct 2015 - Feb 2019*

- GPA: 1.8 (range: 1.0 to 5.0, with 1.0 being the highest and 4.0 minimum to pass)
- Thesis title: The influence of trait-anxiety on the psychophysiological stress-reaction in women; supervisor: Prof. Markus Heinrichs, grade: 1.3

### Albert-Ludwig's University
*Freiburg, Germany*

Additional courses/ minor (30 ECTS), Computer Science    *Oct 2016 - Feb 2019*

### University of Hong Kong
*Hong Kong, Hong Kong*

Exchange Semester, Psychology    *Aug 2017 - Feb 2018*

- Courses: lateralisation of the brain, Asian perspectives on psychotherapy
- Big data research internship, see "research experiences"
- Extracurricular: Player of St.John College tennis team

### Ernst-Moritz-Arndt Gymnasium
*Bonn, Germany*

Abitur (Higher education entrance diploma)    *2006 - 2014*

- GPA: 1.2 (range: 1.0 to 5.0, with 1.0 being the highest and 4.0 minimum to pass)
- Science prizes: National German computer science competition: 1st prize 2014, German Mathematics Olympics 2nd prize 2007, 2009
- Extracurricular: Class and grade representative 2007-2014, peer-to-peer counsellor, dispute settlement student, tutor

## **Res**earch Experience

### Ludwig-Maximilian University
*Munich, Germany*

PhD Research Candidate in Neuroscience & AI    *Jul 2022 - PRESENT*

- Topics: Graph learning for neuroimaging data to advance the diagnosis & prognosis of psychiatric disorders, interpretable AI models, deep learning models for neuroimaging data
- Other responsibilities: Software development of Machine Learning Toolbox (NeuroMiner), organization of collaborative projects with international labs, student supervision

### Ludwig-Maximilian University
*Munich, Germany*

Graduate Research Assistant, Research Software Engineer    *Aug 2021 - Jul 2022*

- Continuation & publication of master's thesis project & other study
- Co-organization of Machine Learning Summer School 2022
- Software development of Machine Learning Toolbox (NeuroMiner)

### Amsterdam University Medical Center (AMC)
*Amsterdam, The Netherlands*

Graduate Research Assistant    *Oct 2021 - PRESENT*

- Topic: The impact of pregnancy on the maternal brain
- Responsibilities: setting up of the large-scale study

### University of Amsterdam
Amsterdam, The Netherlands

STATISTICS & MACHINE LEARNING TEACHING ASSISTANT
Mar 2021 - Feb 2022

- Mar - Jun 2021: Multivariate statistics and Machine learning
- Sep - Oct 2021: Simulation Models, Methods & Statistics
- Nov - Dec 2021: Current Topics in Psychology & AI
- Jan 2022: Programming in Psychological Sciences

### German Center of Aviation and Aerospace (DLR)
Hamburg, Germany

RESEARCH INTERN
Aug 2018 - Oct 2018

- Main topic: Team performance optimisation, cognitive aptitude tests for pilot & air traffic controller applicants
- Responsibilities: Literature review, data analysis, scientific writing
- Supervisor: Dr. Carmen Bruder

### University of Hong Kong
Amsterdam, The Netherlands

RESEARCH INTERN
Sep 2017 - Jan 2018

- Topic: Influence of environmental factors on generosity, crime rate, and happiness (Grade: A-, UK grading system)
- Responsibilities: Searching for available country-level datasets, data analysis, reporting results, presentation at lab meetings
- Supervisor: Dr. Henry K.S. NG

### Albert Ludwig's University
Freiburg, Germany

TEACHING ASSISTANT
Feb 2017 - Aug 2017

- Course: Scientific research methods in medicine
- Topics: Statistics, good research practices, critical evaluation of scientific papers

### Albert-Ludwig's University
Freiburg, Germany

RESEARCH INTERN
Oct 2016 - Mar 2017

- Topic: The influence of oxytocin & behaviour therapy on social congnition & clinical symptoms of borderline patients
- Responsibilities: running test sessions, data processing in Excel & SPSS
- Supervisors: Prof. Markus Heinrichs, Dr. Ellen Rueckert

## **Ind**ustry Experience

### Murmuras
Bonn, Germany

RESEARCH CONSULTANT & DATA ANALYST
May 2020 - Oct 2021

- Responsibilities: Building predictive machine learning models and analysing high-dimensional smartphone data (app usage, location data) in R and Python, Planning and writing articles (R tutorials), Conference presentations, Support of client researchers

### Neurofied Brain & Behaviour Academy
Amsterdam, The Netherlands

CONTENT AND SOCIAL MEDIA MANAGER
Mar 2019 - Apr 2020

- Responsibilities: Organisation of social media accounts, monthly newsletter, blog posts

### LVR Psychiatric Clinic
Bonn, Germany

INTERN
Aug 2016 - Oct 2016

- Conducting neurocognitive tests, sitting in on group and one-on-one therapy sessions, doctor's rounds

### Dream Divers
Gili Trawangan, Indonesia

SCUBA DIVING OPEN WATER INSTRUCTOR
Sep 2014 - Sep 2015

- Teaching beginner and advanced scuba diving lessons (theory + practise)
- SSI Open Water Instructor License including Emergency First Responder Instructor

### City of Bonn
Bonn, Germany

LIFEGUARD IN PUBLIC SWIMMING POOL
May 2014 - Sep 2014

## **Vol**unteering Experience

### KI macht Schule ("AI goes to schools")
Bonn, Germany

VOLUNTEER WORK: HR, REGIONAL GROUP LEAD, AI INSTRUCTOR IN HIGH SCHOOLS
Oct 2021 - PRESENT

- volunteer engagement with the inititative KI macht Schule in Germany. Our goal is to bring AI into high school curricula, e.g., by holding courses focused on different applications of AI for students (www.ki-macht-schule.de)
- responsibilities: hiring processes, course instructor, development of new course material

**Data vs. Corona** *remote*

<small>VOLUNTEER WORK: STUDENT DATA SCIENTIST</small> *May 2020 - Jul 2021*

- Assistance on multinational PsyCorona study (paper submitted)
- Preprint: Early indicators of COVID-19 Infection Prevention Behaviours: Machine Learning identified Psychological and Country-Level Factors, https://psyarxiv.com/whjsb/
- Responsibilities: Pre-processing of publicly available datasets, running ML algorithms (RF and LASSO) on these datasets together with psychological survey data to predict COVID-19-related behaviour in R

## Publications

**Using Machine Learning to Identify Important Predictors of COVID-19 Infection Prevention Behaviours During the Early Phase of the Pandemic** *Patterns*

<small>CO-AUTHOR</small> *Mar 2022*

https://doi.org/10.1016/j.patter.2022.100482

**Popular science blog posts for Murmuras, Neurofied, and Data vs. Corona** *Respective websites*

<small>AUTHOR</small> *Mar 2019 - PRESENT*

R tutorials, Applications of smartphone sensing, Neuro marketing, Corona pandemic as a social dilemma

## Conference Presentations

**Neuromatch Conference** *Online*

<small>PRESENTER & MAIN AUTHOR</small> *Sep 2022*

- Flash talk: Structural covariance networks for the individualized diagnosis of schizophrenia

**ICP 2021 (International Congress of Psychologists)** *Online*

<small>PRESENTER & MAIN AUTHOR</small> *Jul 2021*

- Presenter & main author: Real-world movement and digital behavior of Corona-Warn-App users during the COVID-19 pandemic

**ICP 2021 (International Congress of Psychologists)** *Online*

<small>CO-AUTHOR</small> *Jul 2021*

- Topic: Smartphone sensing methodology

**TEAP 2021 (Conference of Experimental Psychologists)** *Online*

<small>PRESENTER & MAIN AUTHOR</small> *Apr 2021*

- Presenter & main author: Assessing bed-time and wake-up patterns of large cohorts with smartphone data

## Skills

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|---|---|
| **Programming** | Python (master-level) incl. PyTorch (Neuromatch Academy), R (master-level), MatLab (master-level), SPSS (bachelor-level) |
| **Other IT Skills** | LaTex (working knowledge), Markdown (working knowledge), MS Office Programmes |
| **Languages** | German (native language), English (fluent), French (good; B2 level), Dutch (good; B2 level), Latin proficiency certificate ('Latinum') |

## Activities

**Sports** Tennis, Running, Yoga, Skiing, Scuba Diving, Hiking

**Traveling** especially when it involves one of the latter three sport activities

**Painting** I just started a new painting course, also I like to just scribble in my freetime