

# Lukas Muttenthaler | CV

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## Education

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- **PhD, Computational Neuroscience** **Leipzig, Germany**  
2020-  
*ViCC group, Max-Planck-Institute for Human Cognitive and Brain Sciences*  
**Topic:** Semantic representations of objects in human brains and artificial intelligence systems  
**Advisor:** Martin Hebart
- **MSc, IT and Cognition (NLP)** **Copenhagen, Denmark**  
2018-2020  
*Department of Computer Science, University of Copenhagen*  
**Thesis:** Deciphering the inner workings of Transformers in the realm of subjectivity  
**Advisors:** Isabelle Augenstein, Johannes Bjerva
- **BSc, Psychology** **Vienna, Austria**  
2015-2018  
*Faculty of Psychology, University of Vienna*  
**Thesis:** How language shapes motion event cognition  
**Advisors:** Ulrich Ansorge, Thomas Ditye
- **BA, Political Science & Philosophy** **Vienna, Austria**  
2012-2015  
*Faculty of Social Sciences, University of Vienna*  
**Advisor:** Ursula Naue

## Employment

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- **PhD Researcher** **Leipzig, Germany**  
August 2020 -  
*ViCC group, Max-Planck-Institute for Human Cognitive and Brain Sciences*
- **Research Assistant & Programmer** **Copenhagen, Denmark**  
May 2019 - January 2020  
*Machine Learning, Department of Computer Science, University of Copenhagen*
- **Data Analyst** **Copenhagen, Denmark**  
January - April 2019  
*Technology Advisory, Ernst & Young (EY)*
- **Research Intern** **Munich, Germany**  
July - September 2017  
*Department of Clinical Neuropsychology, LMU Munich*
- **Student Research Assistant** **Vienna, Austria**  
July 2016 - June 2018  
*Cognitive Psychology, Faculty of Psychology, University of Vienna*

## Scholarships & Achievements

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- **EDOC 2019** **Paris, France**  
2019  
*Best Demonstration Award*
- **Fund of Excellence** **Vienna, Austria**  
2018  
*one of a few candidates who received funding to pursue a Master's in a STEM subject*

- **Scholarship for Academic Excellence** **Vienna, Austria**  
2016 - 2018  
awarded by UV for three consecutive years for excellent grades in Psychology
- **Performance Scholarship** **Vienna, Austria**  
2016 - 2018  
awarded by Julius-Raab-Foundation due to high achievements in BSc Psychology
- **Scholarship for Academic Excellence** **Vienna, Austria**  
2013 - 2015  
awarded by UV for three consecutive years for excellent grades in Political Science

## Teaching

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- **Teaching Assistant** **Vienna, Austria**  
2017-2018  
Cognitive Psychology II, Faculty of Psychology, University of Vienna  
Visual Perception, Memory, Attention, Intelligence

## Skills

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- **Natural Languages:**  
English (IELTS 8.0), German (native)
- **Programming Languages:**  
Python (extensive), Matlab (intermediate), R (basic), SQL (basic)
- **Libraries:**  
PyTorch, TensorFlow, Keras, NumPy, Scikit-Learn, sciPy, Pandas, spaCy
- **Other technical skills:**  
L<sup>A</sup>T<sub>E</sub>X, Unix, Bash, Slurm, GitHub, GitBash, Overleaf, Jupyter

## Publications

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### Peer-reviewed.....

- SUBMITTED: **Muttenthaler, L.**, Augenstein, I., Bjerva, J. (2020). Unsupervised Evaluation of Question Answering. *Under Review for EMNLP 2020*.
- López, H. A., Marquard, M., **Muttenthaler, L.**, Strømsted, R. (2019). Assisted Declarative Process Creation from Natural Language Descriptions. In 2019 IEEE 23rd International Enterprise Distributed Object Computing Conference (EDOC). DOI: 10.1109/EDOCW.2019.00027 [*Best Demonstration Award*]
- **Muttenthaler, L.**, Lucas, G., Amann, J. (2019). Authorship Attribution in Fan-fictional Texts Given Variable Length Character and Word *n*-grams - Notebook for PAN at CLEF 2019. In Linda Cappellato, Nicola Ferro, David E. Losada and Henning Mueller, editors, *CLEF 2019 Labs and Workshops, Notebook Papers, September 2019*. CEUR-WS.org. [*Winning team of the PAN authorship attribution competition*]
- Buesel, C., Ditye, T., **Muttenthaler, L.**, Ansorge, U. (2019). A Novel Test of Pure Irrelevance-Induced Blindness. *Frontiers in Psychology*, 10:375. DOI: 10.3389/fpsyg.2019.00375
- **Muttenthaler, L.** (2019). Effective enhancement of attentional functions in the amblyopic brain. *Journal of European Psychology Students*, 10(1), 1-10. DOI: 10.5334/jeps.435

### Preprints.....

- **Muttenthaler, L.** (2020). Subjective Question Answering: Deciphering the inner workings of Transformers in the realm of subjectivity. Master's thesis, University of Copenhagen.

- **Muttenthaler, L.**, Hollenstein, N., Barrett, M. (2020). Human brain activity for machine attention.