

# Curriculum Vitae - Corinna Elena Wegner

Last updated: January 2025

## Education

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|---------------------------|---|
| October 2023 – present    | M.Sc. in Physics<br><i>Georg-August-University, Göttingen</i>             |
| October 2019 – April 2023 | B.Sc. in Physics<br><i>Ludwig-Maximilians-University, Munich</i>          |
| August 2010 – June 2019   | Abitur, average grade 1.1<br><i>Robert-Bosch-Gesamtschule, Hildesheim</i> |

## Research experience

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| October 2024 – present      | Research assistant in the NLP group at University of Göttingen <ul style="list-style-type: none"><li>Investigation of LLM's problem solving abilities</li></ul>  |
| May 2023 – July 2023        | Research assistant in the lab of Prof. Dr. Ferenc Krausz (Nobel laureate in physics 2023) <ul style="list-style-type: none"><li>Further investigation into Bachelor Thesis project, including publication writing</li><li>Working on a generative adversarial network to simulate blood spectra of artificial patients</li></ul>   |
| September 2022 – March 2023 | Bachelor Thesis <ul style="list-style-type: none"><li>Supervisors: Prof. Dr. Ferenc Krausz and Dr. Kosmas V. Kepesidis</li><li>Title: "Denoising of blood-based infrared spectroscopic fingerprints with deep learning"</li><li>Designed and trained a denoising autoencoder to preprocess spectra from blood plasma for cancer detection via machine learning</li></ul> |

## Publications

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| Under revision | <b>Corinna Wegner</b> , Zita I. Zarandy, Nico Feiler, Lea Gigou, Timo Halenke, Niklas Leopold-Kerschbaumer, Maik Krusche, Weronika Skibicki, Kosmas V. Kepesidis.<br><b>"Toward informative representations of blood-based infrared spectra via unsupervised deep learning"</b> , <i>Journal of Biophotonics</i> |
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## Teaching experience

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|---------------------------|---|
| October 2024 – present    | Teaching assistant,<br>Programming for Data Scientists at University of Göttingen <ul style="list-style-type: none"><li>Tutorials in data science related python programming</li><li>Supply lecturer (two times during the semester)</li><li>Grading of projects and oral exams</li></ul> |
| October 2023 – March 2024 | Teaching assistant,<br>Mathematical methods for physicists at the University of Göttingen   |

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|                              | <ul style="list-style-type: none"> <li>• Tutorials on various topics in analysis, linear algebra and analytical geometry</li> <li>• Exam preparation lectures</li> <li>• Exam supervision and grading</li> </ul> |
| September 2023               | Teaching assistant,<br>Physics lab course for dentistry students at the University of Munich <ul style="list-style-type: none"> <li>• Supervision and grading of experiments on X-rays</li> </ul>                |
| January 2023 – February 2023 | Ski instructor,<br>Technical University of Munich  |
| October 2022 – January 2023  | Teaching assistant,<br>Physics lab course for medical students at the University of Munich <ul style="list-style-type: none"> <li>• Supervision and grading of various experiments</li> </ul>                    |

## Languages

German (*native speaker*)

English (*proficient*)

Spanish (*good knowledge in writing and speaking*)

## IT skills

Python (*expert*)

MATLAB

R

JavaScript

HTML/CSS

LaTeX

Git

C

C++

Docker

High performance computing (SLURM)

## Volunteer Work

November 2023 – present

Active member of physics student council at University of Göttingen

- Website hosting
- Event organization
- Consultative student member of master selection commission

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| October 2021 – October 2023 | Active member of physics student council at University of Munich |
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#### Summer schools attended

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| September 2024 | International Computational Cognitive Science Summer School, <i>Osnabrück</i>        |
| July 2024      | NeuroAI: Harnessing AI to understand computation in mind and brain, <i>Amsterdam</i> |
| March 2024     | Interdisciplinary College: Resilience, Robustness, Responsibility, <i>Soest</i>      |