

Nick Lemke






Ph.D. Candidate, TU Darmstadt, Germany

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in Nick Lemke

🌐 <https://nickl1234567.github.io/>

Employment History

- 05/2024 –  **Ph.D. student**, MEC-Lab, TU Darmstadt
Research on resource-constrained AI for medical image analysis
- 10/2023 – 12/2023  **Research Assistant**, MEC-Lab, TU Darmstadt
Implementation of federated NCA training
- 04/2023 – 09/2023  **Working Student**, Fraunhofer IGD, Darmstadt
Implementation of a parallel packing algorithm for 3D printing
- 11/2022 – 02/2023  **Research Assistant**, MEC-Lab, TU Darmstadt
Implementation and evaluation of a continual learning method
- 2017 – 2023  **Private tutoring** in high school level computer science, mathematics, physics, chemistry, and English.

Education

- 05/2024 –  **Ph.D. student**, MEC-Lab, TU Darmstadt
Research on resource-constrained AI for medical image analysis
- 01/2023 – 04/2024  **M.Sc. Computer Science**, TU Darmstadt.
Thesis title: *Distribution-Aware Replay for Continual MRI Segmentation*.
- 10/2020 –  **B.Sc. Mathematics**, TU Darmstadt.
- 10/2019 – 01/2023  **B.Sc. Computer Science**, TU Darmstadt.
Thesis title: *Convert a high-polygon mesh to a low-polygon mesh with a displacement map*.

Research Publications





Journal Articles

- 1 C. Gonzalez, **N. Lemke**, G. Sakas, and A. Mukhopadhyay, “What is wrong with continual learning in medical image segmentation?,” 2023. arXiv: 2010.11008.

Conference Proceedings



- 1 **N. Lemke**, C. González, A. Mukhopadhyay, and M. Mundt, “Distribution-aware replay for continual mri segmentation,” in *International Workshop on Personalized Incremental Learning in Medicine*, Springer, 2024, pp. 73–85.

Skills

- Languages  **German** (Native language), **English** (Fluent)
- Coding  Java, C/C++, Python, C#
- C++ APIs  OpenMP, CUDA
- Misc.  L^AT_EX typesetting, Git, MS-Office, Linux

Miscellaneous Experience

Awards and Achievements

- 2023  **Winner of the AI Competition *Wettbewerb KI in der Medizin*** held at TU Darmstadt.
Topic: Classification and onset detection of seizures in EEG recordings.
-  **Second place in the Hackathon *ProKI*** hosted by the departments of mechanical engineering at TU Darmstadt and Karlsruhe Institute of Technology, as well as Fraunhofer LBF, Verein Deutscher Ingenieure and the Freudenberg Group.
Topic: Predicting a wear and tear index for milling tools.