

### Education

- 2021–2024 **PhD, Computer Science**, *University of Copenhagen*  
Research Topics: Natural Language Processing, Machine Learning  
Advisor: Prof. Anders Søgaard
- 2018–2020 **M.Sc., Computer Science**, *TU Darmstadt*, *Cumulative GPA: 1.34\**  
Focus: Natural Language Processing, Machine Learning, Data Mining, Artificial Intelligence  
Subsidiary Subject: Business & Law  
Thesis Supervisors: Jonas Pfeiffer, Prof. Iryna Gurevych
- 2015–2018 **B.Sc., Computer Science**, *DHBW Stuttgart*, *Cumulative GPA: 1.4\**  
ECTS Grade A

\*On a scale of 1-5 with 1.0 being the best possible

### Publications and Manuscripts

- [1] **Phillip Rust**, Jonas F. Lotz, Emanuele Bugliarello, Elizabeth Salesky, Miryam de Lhoneux, and Desmond Elliott. Language Modelling with Pixels. In *ICLR (notable-top-5%)*, 2023.
- [2] **Phillip Rust** and Anders Søgaard. Differential Privacy, Linguistic Fairness, and Training Data Influence: Impossibility and Possibility Theorems for Multilingual Language Models. *Under Review*, 2023.
- [3] Constanza Fierro\*, Laura Cabello Piqueras\*, Jonas F. Lotz\*, **Phillip Rust\***, Joen Rommedahl, Jeppe Klok Due, Christian Igel, Desmond Elliott, Carsten Bøcker Pedersen, Israfel Salazar, and Anders Søgaard. Date Recognition in Historical Parish Records. In *Frontiers in Handwriting Recognition (ICFHR)*, 2022.
- [4] Daniel Hershcovich, Stella Frank, Heather Lent, Miryam de Lhoneux, Mostafa Abdou, Stephanie Brandl, Emanuele Bugliarello, Laura Cabello Piqueras, Ilias Chalkidis, Ruixiang Cui, Constanza Fierro, Katerina Margatina, **Phillip Rust**, and Anders Søgaard. Challenges and Strategies in Cross-Cultural NLP. In *ACL*, 2022.
- [5] **Phillip Rust\***, Jonas Pfeiffer\*, Ivan Vulić, Sebastian Ruder, and Iryna Gurevych. How Good is Your Tokenizer? On the Monolingual Performance of Multilingual Language Models. In *ACL*, 2021.
- [6] Gözde Gül Şahin, Yova Kementchedjhieva, **Phillip Rust**, and Iryna Gurevych. PuzzLing Machines: A Challenge on Learning From Small Data. In *ACL*, 2020.

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## Work Experience

- 2018–2021 **Technical Consultant**, *DXC Technology*, Frankfurt, Germany  
Technical consulting and software development on petabyte-scale data and compute platforms (OpenShift, MapR) for client in the area of autonomous driving.
- 2015–2018 **DualStudy B.Sc. Program**, *Hewlett Packard Enterprise*, Germany/USA  
Integrated program that combined studies in computer science at DHBW Stuttgart with six internships in various departments and locations at Hewlett Packard Enterprise and DXC Technology. Included a summer internship in the area of high performance computing research and development with Harumi Kuno at Hewlett Packard Labs in Palo Alto, USA.

## Volunteering

- 2019–2020 **AIESEC**, Darmstadt, Germany  
Volunteering activity mainly consisting of the following components:
- Preparing foreign students for their professional traineeships in Germany
  - Taking care of the well-being and personal development of trainees in Germany
  - Building and maintaining relationships with companies offering traineeships in the area

## Summer/Winter Schools

- 2021 **Lisbon Machine Learning Summer School (LxMLS)**, *Virtual*  
2021 **Advanced Language Processing Winter School (ALPS)**, *Virtual*  
2023 **HPLT & NLPL Winter School**, *Skeikampen, Norway*

## Invited Talks

- 08/2022 **Amazon AWS AI (Tel Aviv)**, *Language Modelling with Pixels*, Remote  
09/2022 **Pioneer Centre for AI**, *Language Modelling with Pixels*, Copenhagen, Denmark  
01/2023 **Amazon AWS AI (New York)**, *Language Modelling with Pixels*, Remote  
01/2023 **COLT Group, UPF Barcelona**, *Language Modelling with Pixels*, Remote

## Grants

- 2022 **EuroHPC Compute Grant**, *“Pixel Encoding of Language”*, with Desmond Elliott

## Service & Professional Activities

**Reviewing:** ARR, ACL, EMNLP, EACL, MRL @ EMNLP, TiE @ ECCV, TL4NLP @ NeurIPS

**Program Committee:** MRL @ EMNLP, TL4NLP @ NeurIPS

**Organization:** Weekly NLP Section Reading Group, University of Copenhagen

**Teaching Assistance:** Advanced Topics in NLP, Introduction to Data Science

## Technical Skills

**Programming:** Python (excellent), Java and JavaScript (intermediate)

**ML & NLP Frameworks:** PyTorch, PyTorch XLA, HuggingFace Ecosystem, NumPy, TensorFlow

**Miscellaneous:** Unix, Slurm, MapR, Kubernetes, Docker, Airflow, Elastic Stack, Ansible

## Languages

German (native), English (fluent, TOEFL iBT 112), Japanese (elementary), Danish (elementary)

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