Phillip Rust

Resume

Education

2021–2025 **PhD, Computer Science**, *University of Copenhagen*
Research Focus: 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, Artificial Intelligence
Thesis Supervisors: Dr. 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, 1.0 being the best possible grade

Work Experience

08/2024–02/2025 **Applied Scientist Intern**, *Amazon AGI*, Cambridge, UK
Post-training for Amazon Nova Speech-to-Speech. Research on modular and multi-objective preference optimization for conversational speech in multimodal LLMs.

06/2023–12/2023 **Research Scientist Intern**, *Meta, Fundamental AI Research (FAIR)*, Menlo Park, USA
Research on self-supervised video pretraining for large-scale sign language translation.

10/2018–03/2021 **Technical Consultant – DualStudy Master**, *DXC Technology*, Frankfurt a.M., Germany
Technical consulting in data analytics and software engineering on petabyte-scale data and compute platforms for client in the area of autonomous driving.

10/2015–09/2018 **Intern – DualStudy Bachelor**, *Hewlett Packard Enterprise*, Bad Homburg, Germany
Integrated program that combined studies in computer science at DHBW Stuttgart with six internships in various departments and locations at Hewlett Packard Enterprise. Included an internship with Dr. Harumi Kuno at Hewlett Packard Labs in Palo Alto, USA.

Publications

[1] Antonia Karamolegkou, **Phillip Rust**, Yong Cao, Ruixiang Cui, Anders Søgaard, and Daniel Hershcovich. Vision-Language Models under Cultural and Inclusive Considerations. In *HuCLLM Workshop @ ACL*, 2024.

[2] **Phillip Rust**, Bowen Shi, Skyler Wang, Necati Cihan Camgöz, and Jean Maillard. Towards Privacy-Aware Sign Language Translation at Scale. In *ACL*, 2024.

[3] Nadav Borenstein, **Phillip Rust**, Desmond Elliott, and Isabelle Augenstein. PHD: Pixel-Based Language Modeling of Historical Documents. In *EMNLP*, 2023.

[4] Jonas Lotz, Elizabeth Salesky, **Phillip Rust**, and Desmond Elliott. Text Rendering Strategies for Pixel Language Models. In *EMNLP*, 2023.

[5] **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.

+45 81655558 • p.rust@di.ku.dk • phillip.rs • phillip rust
phillip-rust • rust_phillip • xplip

[6] **Phillip Rust** and Anders Søgaard. Differential Privacy, Linguistic Fairness, and Training Data Influence: Impossibility and Possibility Theorems for Multilingual Language Models. In *ICML*, 2023.

[7] 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.

[8] 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.

[9] **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.

[10] Gözde Gül Şahin, Yova Kementchedjhieva, **Phillip Rust**, and Iryna Gurevych. PuzzLing Machines: A Challenge on Learning From Small Data. In *ACL*, 2020.

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*, Virtual
09/2022 **Pioneer Centre for AI**, *Language Modelling with Pixels*, Copenhagen, Denmark
01/2023 **Amazon AWS AI (New York)**, *Language Modelling with Pixels*, Virtual
01/2023 **COLT Group, UPF Barcelona**, *Language Modelling with Pixels*, Virtual
03/2023 **ML Collective Reading Group (NLP & CV)**, *Language Modelling with Pixels*, Virtual

Service & Professional Activities

Reviewing: ACL Rolling Review, 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 (21/22, 22/23), Introduction to Data Science (21/22)

Technical Skills

Programming: Python, Java, JavaScript, C++
ML/AI: PyTorch, HuggingFace Ecosystem, DeepSpeed, vLLM
Miscellaneous: Unix, Slurm, Docker, AWS (S3, SageMaker, EC2), Kubernetes, Airflow, Gradio

Languages

German (native), English (full professional proficiency), Japanese (elementary), Danish (elementary)

+45 81655558 • p.rust@di.ku.dk • phillip.rs • phillip rust
phillip-rust • rust_phillip • xplip