

# Konstantin Dobler

PhD Student & Graduate Researcher

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## Education

- Nov 2022 – Oct 2026 **PhD in Machine Learning**, Hasso Plattner Institute, *Potsdam, Germany*.  
*Advisors: Gerard de Melo and Ralf Herbrich. Supported by KISZ-BB, a project funded by the German Ministry for Education and Research (2022-2023).*
- Oct 2020 – Aug 2022 **MSc in Computer Science**, Hasso Plattner Institute, *Potsdam, Germany*.  
– Thesis: “Specializing Pretrained Multilingual Language Models on a Single Language”, graded *with distinction*.  
– Cumulative GPA: 1.2<sup>†</sup>
- Oct 2016 – Sep 2020 **BSc in Computer Science**, Hasso Plattner Institute, *Potsdam, Germany*.  
– Thesis: “Extracting User Behavior and Process Semantics from Usage Data of Enterprise Applications”, graded *with distinction*.  
– Cumulative GPA: 1.5<sup>†</sup>

<sup>†</sup>On a scale from 1-5 with 1.0 being the best possible grade.

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## Publications

- NeurIPS 2023 Hagemann, Weinbach, **Dobler**, Schall, and de Melo. “Efficient Parallelization Layouts for Large-Scale Distributed Model Training”. **Best Paper (Workshop)**. *Workshop on Advancing Neural Network Training*. [Paper] [Code]
- EMNLP 2023 **Dobler** and de Melo. “FOCUS: Effective Embedding Initialization for Monolingual Specialization of Multilingual Models”. [Paper] [Code]
- IJCAI 2022 **Dobler**, Hübscher, Westphal, Sierra-Múnera, de Melo, and Krestel. “Art Creation with Multi-Conditional StyleGANs”. [Paper] [Code]

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## Patents

- 2021 Berg et al. (incl. **Dobler**). “Generation of Bots Based on Observed Behavior”, US Patent Office, [US10977058B2](https://patents.google.com/patent/US10977058B2).

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## Professional Experience

- Nov 2022 – Present **Graduate Researcher at Hasso Plattner Institute, Potsdam, Germany**.  
– Researching transfer of pretrained large language models to new languages and tasks  
– Teaching assistant for Machine Learning and Programming courses
- Sep 2021 – Sep 2022 **Co-Founder, Machine Learning at Nailvision, Berlin, Germany**.  
**Pitch:** Nail disease prevalence is widely underestimated – Nailvision supports patients with fast AI-powered diagnosis, a digital patient journey, and custom treatment kits.
- May 2020 – Oct 2021 **Software Engineer, Co-op at SAP, Berlin, Germany**.  
– Developed business process analytics and visualization shipped to Fortune 500 companies  
– Contributed layout algorithm [implementation](#) to open-source graph processing library
- Sep 2019 – Mar 2020 **Software Engineer, Intern at SAP Labs, Newport Beach, CA**.  
– Integrated real-time streaming of speech-to-text service using websockets and gRPC  
– Reduced TravisCI pipeline runtimes by up to 90% through caching and parallelization
- Oct 2018 – Sep 2019 **Research Student at SAP, Potsdam, Germany**.  
– Researched and implemented a business process graph analytics system presented by the CTO to an international audience at SAPHIRE 2020  
– Co-Inventor of [US patent](#): Automatically generate RPA bots from user behavior

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## Selected Awards

- Sep 2022 Honors Medal, *MSc graduation “with distinction” from Hasso Plattner Institute.*
- Mar 2022 CleanIT Hackathon, *First Place (1000€).*
- Sep 2021 HPI Business Plan Competition, *Scholarship (18,000€) and Investment (50,000€).*

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## Summer/Winter Schools

- 2024 HPLT & NLPL Winter School on Large Language Models, *Skeikampen, Norway.*
- 2024 Machine Learning Summer School (MLSS), *Okinawa, Japan.*
- 2024 Advanced Language Processing School (ALPS), *Aussois, France.*

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## Academic Service

### Teaching

- Fall 2022 Introduction to Data Science and Machine Learning, *Teaching Assistant.*  
Hasso Plattner Institute
- Spring 2023 Natural Language Processing, *Teaching Assistant.*  
Hasso Plattner Institute
- Fall 2023 Introduction to Programming I, *Teaching Assistant.*  
Hasso Plattner Institute
- Fall 2023 NLP and CV with Deep Learning Research Seminar, *Project Supervisor.*  
Hasso Plattner Institute

### Supervision

- Jan 2023 – Aug 2023 Johannes Hagemann, Master Thesis, *Advisor.*  
Hasso Plattner Institute, Industry Partner: Aleph Alpha

### Reviewing

- 2023 TheWebConf, *Reviewer.*

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## Technical Skills

- Languages Python, C++, C, TypeScript, JavaScript, Java, Smalltalk.
- Foundations Linux, Docker, Bash, Git, SLURM, CI/CD (TravisCI, GitHub Actions), SQL.
- Machine Learning PyTorch, Distributed & Sharded Training, HuggingFace, numpy, pandas.
- Dev Experience Flask, React, Node.js, React Native, pytest, HTML/CSS, AWS, GCP, ppc64le.
- Open Source PyTorch [\[1\]](#) [\[2\]](#), HuggingFace transformers [\[1\]](#) [\[2\]](#) and [evaluate](#), [Weights & Biases](#), LightningAI [lightning](#) and [lit-gpt](#), Antvis [G6](#), Google Research [XTREME](#), Spotify [Web API](#), [print-on-steroids](#), [nlp-research-template](#).

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## Talks

- Sep 2023 Efficient (Language) Model Training at Research Lab Scale.  
Data & AI Retreat of Hasso Plattner Institute and UC Irvine