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## EDUCATION

### UNIVERSITY OF BERN

#### PHD IN COMPUTER SCIENCE

Jul. 2020 - Jan. 2024 | Switzerland

**summa cum laude** (Grade average: **6/6**)

Advisors: Matthias Stürmer & Ilias Chalkidis

### STANFORD UNIVERSITY

#### RESEARCH VISIT

Oct. 2022 - Mar. 2023 | Switzerland

Advisors: Daniel E. Ho & Percy Liang

Collaboration with the CRFM

### UNIVERSITIES OF BERN, NEUCHÂTEL, AND FRIBOURG

#### MSC IN COMPUTER SCIENCE

Sep. 2018 - Dec. 2019 | Switzerland

Grade average: **5.50/6** | Thesis: **6/6**

Exchange: NTU, Singapore

### UNIVERSITY OF BERN

#### BSC IN COMPUTER SCIENCE

Sep. 2013 - Aug. 2018 | Switzerland

Grade average: **5.41/6** | Thesis: **6/6**

Exchange: University of Exeter, England

## LINKS

Google Scholar

LinkedIn:// [joelniklaus](#)

Twitter:// [@joelniklaus](#)

Github:// [joelniklaus](#)

HuggingFace:// [joelniklaus](#)

## SKILLS & INTERESTS

### LANGUAGES

German • English • Spanish • French

### PROGRAMMING

used regularly:

Python • Java • PHP • TypeScript

can get things done:

Kotlin • Sass • SQL •  $\text{\LaTeX}$

### FRAMEWORKS

transformers & datasets • PyTorch • JAX •

PAX • T5X • SeqIO • SpaCy • Keras

### TOOLS

Docker • Git • PyCharm • AWS • GCP

### RESEARCH INTERESTS

Legal NLP • Data Centric ML •

Benchmarking • Multilingual Language

Model Pretraining • Instruction Tuning

## EXPERIENCE

### (GOOGLE) X | PHD RESIDENT

Jul. 2023 - Nov. 2023 | Mountain View, United States

I pretrained and instruction tuned multi-billion parameter multilingual LLMs in the Legal Domain on hundreds of TPU cores achieving state-of-the-art on LegalBench.

### THOMSON REUTERS LABS | DATA SCIENCE INTERN

Mar. 2022 - Aug. 2022 | Zug, Switzerland

I cheaply pretrained Longformers for the Legal Domain. Patent Application pending.

### NIKLAUS.AI | AI CONSULTANT

Apr. 2022 - present | Bern, Switzerland

I consult companies on topics in AI, and especially in NLP. Selected customers: Swiss Federal Supreme Court, Darrow AI Ltd. (Legal Judgment Prediction in the US)

### BERN UNIVERSITY OF APPLIED SCIENCES | LECTURER

Aug. 2021 - present | Bern, Switzerland

I lecture about LLMs in three applied modules on AI.

I planned and conducted the technical part of the module Software Engineering.

### UNIVERSITY OF BERN | LECTURER AND TEACHING ASSISTANT

Sep. 2015 - present | Bern, Switzerland

I co-teach about transformers (CAS), planned and led the “NLP Seminar” (BSc/MSc), and was a TA for “Programming Languages” (MSc), “Software Engineering” (BSc) and “Computer Networks” (BSc).

### FASTFORWARD WEBSOLUTIONS GMBH | WEB DEVELOPER

Sep. 2017 - Jun. 2018 | Bern, Switzerland

I independently developed an easy-to-use user interface for a calculator of supplementary services (old age insurance) for Pro-Senectute Switzerland in close collaboration with the client

## AWARDS

|      |                |   |
|------|----------------|---|
| 2023 | Nomination     | Best Paper ARR December for MultiLegalPile paper  |
| 2021 | Research Grant | 60'000 CHF for Swiss Federal Supreme Court  |
| 2019 | Nominee        | Best MSc Thesis, University of Fribourg, Department of Computer Science                                       |
| 2017 | Winner         | Excellent Work in Computer Science (BSc Thesis), Joint Alumni Assoc., Universities Bern, Neuchâtel & Fribourg |

## SELECTED PUBLICATIONS

V. Rasiah, R. Stern, V. Matoshi, M. Stürmer, I. Chalkidis, D. Ho, **J. Niklaus**

**SCALE** : Scaling up the Complexity for Advanced Language Model Evaluation

Under submission at **Journal for AI and Law**

**J. Niklaus**, V. Matoshi, M. Stürmer, I. Chalkidis, D. Ho

**MultiLegalPile** : A 689GB Multilingual Legal Corpus

**DMLR @ ICML 2023**, Hawaii, US

**J. Niklaus**, V. Matoshi, P. Rani, A. Galassi, M. Stürmer, I. Chalkidis

**LEXTREME** : A Multi-Lingual and Multi-Task Benchmark for the Legal Domain

**EMNLP Findings 2023**, Singapore, Singapore

**J. Niklaus**, I. Chalkidis, M. Stürmer

**Swiss-Judgment-Prediction** : A Multilingual Legal Judgment Prediction Benchmark

**NLLP @ EMNLP 2021**, Punta Cana, Dominican Republic