Nadja Herger

AI/ML Model Governance • Data and AI Ethics • Senior Data Scientist • Natural Language Processing

About

Nationality:	Switzerland	E-Mail:	hergernadja@gmail.com
Languages:	German (native), English (fluent),	Website:	https://nherger.github.io
	French (familiarity)	LinkedIn:	https://www.linkedin.com/in/nadja-herger

Profile

Data- and purpose-driven professional with demonstrated expertise in Data Science and AI/ML Model Governance, including AI Ethics. Strong technical background with 8+ years of experience analysing complex datasets using advanced AI/ML methods (using mainly Python) to gain novel insights into data and deliver solutions with real-world impact. Strong communication skills and ability to explain complex technical concepts to a non-technical audience. Experience in managing high-performing globally-distributed teams. Passionate about the use of technology for social good and ethical use of AI (incl. bias/fairness, and XAI).

Work Experience

Jul 2022 - now

Manager, Model Stewardship • Thomson Reuters • Zug, Switzerland
- Managing a high-performing team of 4 Sr. Model Steward Partners across 3 countries.
- Responsible for introducing AI/ML Model Governance to all model-developing and owning teams across Thomson Reuters, including the creation of training material (workshops, learning modules), org-wide communication, providing support to ensure compliance to newly introduced Policies and Standards. Oversight of 300+ models across TR.
- Stakeholder management and change management to create a culture of accountability around the design, development, and deployment of trustworthy AI solutions.
- Member of TR's internal Ethics Advisory Committee.

Jan - Jun 2022

Manager, Data and Model Ethics • Thomson Reuters • Zug, Switzerland
- Managing a team of two Senior Policy Analysts across two locations (CH, CA).
- Support the build-out of the Data and Model Ethics strategy and framework.
- Provide technical advice and training on data and models ethics-related issues (incl. tooling, best practices). Awareness-building around data and model ethics with various stakeholders across the enterprise.
- Supported the initiative to embed ethics-as-a-service as part of the Enterprise AI Platform.

Apr - Dec 2021

Senior Data Scientist • Thomson Reuters • Zug, Switzerland
- Co-lead of the Human-Centric AI research theme as part of the Labs research program. Oversight of various research projects, and definition of the research direction.
- Involvement in a research project around interactive topic modeling, as well as exploration of data drift for unstructured text.
- Took on the Data Science lead role for a range of Natural Language Processing (NLP) projects, responsible for coordinating work amongst a group of Data Scientists, and communicating results with stakeholders.
- Played a crucial role in recruiting a team of Data Scientists in London and Bangalore.

Sep 2018 - Mar 2021

Data Scientist • Thomson Reuters • Zug, Switzerland
- Contributed to various NLP projects, including classification, summarization, entity extraction, using traditional Machine Learning techniques as well as Deep Learning. Analysed data and trained models using AWS Sagemaker.
- Mentored several Data Science interns.
- Participated in a working group to develop Thomson Reuters' first AI Principles.

Jul 2015 - Jul 2018

PhD in Climate Science • UNSW • Sydney, Australia
- Combined global climate model output in a way that their interdependency is accounted for.

The optimal subset is used to better constrain future climate projections (mainly temperature and precipitation fields).
- Used machine learning tools such as multidimensional scaling and clustering to better understand the relationship between climate models and observations.
- Published several peer-reviewed articles and presented at various international conferences.

Technical Skills

Data Science:	Machine Learning (SVM, Random Forest, LDA, …), Deep Learning (LSTM, BERT, …)
Languages:	Python (advanced), MATLAB (intermediate), R (beginner), bash, SQL
Libraries:	pandas, spacy, gensim, HuggingFace, scikit-learn
Cloud:	AWS (Sagemaker - Clarify & Monitor, S3, EC2)
Documentation/Code:	MS Office Suite, Latex, Jupyter Book, Azure DevOps, git via GitHub, VS Code

Education

2015 - 2018 **Ph.D.** candidate (Climate Change Research Centre)
Thesis: *Towards a viable alternative to model democracy using optimal climate model subset selection*
Won the Dean's Award for Outstanding PhD Theses.
UNSW Sydney (Australia)

2013 - 2015 **M.Sc.** in Environmental Sciences (Major in Atmosphere and Climate)
Thesis: *Predicting climate change by fixed patterns: Improved approaches and limitations*; Conducted at NCAR in Boulder, USA.
Grade: 5.79 out of 6 (degree awarded "with distinction")
ETH Zurich (Switzerland)

2010 - 2013 **B.Sc.** in Environmental Sciences (Focus on Atmosphere and Climate)
Thesis: *Susceptibilities in mixed-phase aerosol-cloud interaction simulated over an Alpine transect*
Grade: 5.46 out of 6
ETH Zurich (Switzerland)

Awards

2019 **Dean's Award for Outstanding PhD Theses**
This award recognises PhD graduates who have produced a thesis that is considered outstanding by both examiners.
UNSW Sydney (Australia)

2015 - 2018 **University International Postgraduate Award**
Covers the full cost of tuition fees during the Ph.D. programme (AUD $117,360) and provides a living allowance valued at AUD $77,547 in total.
UNSW Sydney (Australia)

2015 - 2018 **Top up scholarship**
AUD $15,000 in total from the Climate Change Research Centre
UNSW Sydney (Australia)

2013 - 2015 **Excellence Scholarship and Opportunity Programme**
Covers the full study and living costs (CHF 44,000) and tuition fee waiver (CHF 2,596) during the MSc degree. Awarded to the top 2% of students starting a MSc programme.
ETH Zurich (Switzerland)

Publications and Public Speaking

I have led and co-authored a range of peer-reviewed articles which are published in scientific journals. The full list can be found here: https://nherger.github.io/publications/

I had the pleasure to present at various academic and industry conferences, events and meetups. Topics include AI Ethics (incl. Explainable AI) and use cases of NLP in industry. A select list of speaking engagements can be found here: https://nherger.github.io/speaking/