Nadja Herger

Senior Data Scientist • Data and AI Ethics • Human-Centric AI • Natural Language Processing

About

Nationality:	Switzerland	E-Mail:	hergernadja@gmail.com
Date of birth:	01. March 1991	Website:	https://nherger.github.io
Languages:	German (native), English (fluent), French (familiarity)	LinkedIn:	https://www.linkedin.com/in/nadja-herger

Profile

Data- and purpose-driven scientist with a strong technical background and 8+ years of experience analysing complex datasets using statistical inference and machine learning methods. Expertise in programming with Python to gain novel insights into data and deliver solutions with real-world impact. Strong communication skills when it comes to interacting with business stakeholders and explaining complex technical concepts to a non-technical audience. Passionate about the use of technology for social good and AI Ethics (incl. bias/fairness, and Explainable AI). Experience in managing projects and small teams, as well as mentoring.

Work Experience

2021 - now **Senior Data Scientist** • Thomson Reuters • Zug, Switzerland

- Co-lead of the Human-Centric AI research theme as part of the Labs research program.
- 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.

2018 - 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.
- Analyzed data and trained models using AWS Sagemaker.
- Participated in and presented at a range of customer events and workshops.
- Mentored several Data Science interns.
- Participated in a working group to develop Thomson Reuter's AI Principles.

2015 - 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
NLP libraries:	spacy, gensim, HuggingFace, scikit-learn
Software Development:	git integrated with GitHub
Cloud:	AWS (Sagemaker, S3, EC2)
Documentation:	MS Office Suite, Latex, Jupyter Book

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)
	Scientific researcher: Analysing aerosol-cloud interactions from climate model simulations in the summer of 2013. Resulted in two publications.	Yale University (USA)

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 in total) and tuition fee waiver (CHF 2,596) during the Master's degree. Awarded to the top 2% of students starting a Master's 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 Natural Language Processing in industry. A list of speaking engagements can be found here: https://nherger.github.io/speaking/