Sara Vera Marjanović

PhD Student in Information Retrieval & NLP

Github | Google Scholar | LinkedIn | Website

I work to ensure fair and transparent language models, using techniques in XAI, bias detection, and uncertainty quantification.

Education

2023 – now **PhD fellow in Computer Science,** University of Copenhagen, Denmark
» Joint supervision by Prof. Christina Lioma and Dr. Maria Maistro in Information Retrieval and Prof. Isabelle Augenstein in NLP. Anticipated graduation in 04 / 2026.
» Investigating the behaviour of LLMs in high-uncertainty domains using XAI.

2019 – 2021 **MSc in IT & Cognition,** University of Copenhagen, Denmark
» Coursework focused in Large-Scale Data Science (including Machine Learning), Natural Language Processing, Image Processing, and Robotics. cGPA: 11.8/12.0
» Thesis investigated bipartisan gender biases on political discussions on Reddit using measures from Natural Language Processing and Network Science.

2012 – 2016 **BSc in Neuroscience,** McGill University, Canada
» Undergraduate thesis analysed the effect of estrogen administration on the electric organ discharge of the weakly electric fish, *B. gauderio*, using MATLAB.
» Courses in computational neuroscience, evolutionary biology, and computer science. cGPA: 3.91/4.00, Graduated with Distinction. Dean's Honour List: 2013, 2015

Work experience

2022 – 2023 **Consultant,** Capgemini Insights & Data, Denmark
» Played Data scientist role in client projects within public AI & ethics using cloud-computing services (Azure, AWS, Google cloud)
» Led business development projects to improve team compentencies within MLOps, multimodal synthetic data, and quantum machine learning.

2020 – 2022 **Data Scientist,** FocusWRX, Denmark
» Predicted and analysed organizational stress readings (HRV from Garmin watches) and Outlook usage to determine stressors in work environments using time-series forecasting.
» Ran user interviews and analytics research to guide application feature development.

2020 – 2022 **Research Assistant,** Copenhagen Center for Social Data Science, Denmark
» Collaborated in a multi-university project (HOPE) to investigate the social effects of the coronavirus pandemic on democracies.
» Modelled network transmission and narrative patterns of misinformation on Twitter.

Teaching Experience

2023 **Teaching Assistant,** University of Copenhagen, Fair & Transparent Machine Learning
» Designed practical sessions in model (LLM, VLM) probing, fairness metrics and XAI
» Graded and provided feedback/guidance to student presentations and projects

2020 **Teaching Assistant,** University of Copenhagen, Introduction to Social Data Science
» Designed hybrid practical lessons introducing python programming, pandas and scraping to first-year students.
» Taught biweekly quantitative analysis workshops.

Publications

Pending review	*Marjanovic, Augenstein & Lioma. Investigating the Impact of Model Instability on Explanations and Uncertainty. Submitted to ACL 2024. https://arxiv.org/abs/2402.13006*
2022	Marjanovic, Stańczak, & Augenstein (2022). Quantifying Gender Biases Towards Politicians on Reddit. *PlosONE.* https://arxiv.org/abs/2112.12014
2022	Kjær, Marjanovic, Johansen, Baglini & Adler-Nissen (2022). Misinformation, social status og latterliggørelse: En undersøgelse af danskeres spredning af og reaktioner på Covid-19 misinformation på Twitter. *Politica.*
2022	Johansen, Marjanovic, Kjær, Baglini & Adler-Nissen (2022). Ridiculing the "tinfoil hats:" Citizen responses to COVID -19 misinformation in the Danish facemask debate on Twitter. *Harvard Misinformation Review*. *https://misinforeview.hks.harvard.edu/article/ridiculing-the-tinfoil-hats-citizen-responses-to-covid-19-misinformation-in-the-danish-facemask-debate-on-twitter/*

Awards

2021	**Columbus Prisen** (as part of the HOPE project), *Forlaget Columbus* 50000 DKK award for public institutions that uphold ideas of democracy, genuine political commitment and the importance of factual arguments.
2015	**Quinn Research Assistantship Award,** *University of British Columbia* 6000 CAD research grant for undergraduate research within psychology, during a summer internship at the University of British Columbia.

Skills

Coding	*Level*	**Languages**	*Level*	**Tools**	**Hobbies**
Python	●●●●●	English	●●●●●	Tensorflow/Pytorch	Puzzles
R	●●●○○	Serbo-Croatian	●●●●○	Cloud-computing	Climbing
MATLAB	●●●○○	Danish	●●●●○	Git	Endurance sports
LaTeX	●●●○○	French	●●●○○	Pyspark	Reading fiction