

EDUCATION

University College Dublin

Ph.D. Quantitative & Computational Social Sciences
Computational narrative analysis in online media

Dublin, Ireland
2023–Current

University of Padova

M.Sc. Data Science
Thesis: Machine learning-based image forgery detection;

Padova, Italy
2021–2023

Heidelberg University

B.Sc. Physics
Thesis: Hydropheric tracers in environmental physics;

Heidelberg, Germany
2016–2021

SELECTED EXPERIENCE

University College Dublin

PhD Candidate

Research on collective narratives in conflict. Developing novel computational methods that combine structural linguistic theory with large language models to measure narratives. Investigating collective narrative construction and diffusion in different conflicts and across various media environments, including news and social media platforms.

Dublin, Ireland
Oct 23–current

IT University Copenhagen

Visiting PhD Researcher

Worked on measuring narrative polarisation on social media.

Copenhagen, Denmark
Aug 24–May 25

Wayfair Stores LTD

Intern

Worked as a Machine Learning Scientist in the Scam and Fraud Detection Team on Image Recognition Software. Designed, tested, and deployed image-based features.

Berlin, Germany
Mar 23–Sep 23

UN Office for the Coordination of Humanitarian Affairs (OCHA)

Research Project Manager

Led data collection for the evaluation of the impact of UN support on health and food security in displacement camps. Trained and supervised a team of 15 in conducting 4000 interviews over 9 weeks. Managed communication with the displaced communities.

Bentiu, South Sudan
Aug 22–Sep 22

International Security and Development Center (ISDC)

Junior Researcher

Contributed to an impact evaluation for the FAO. Matched and analysed survey data with conflict event data and satellite data on weather and land conditions.

Berlin, Germany
Mar 22–Jun 22

PUBLICATIONS

Journals & Conferences

Elfes, J. (2025). Mapping News Narratives Using LLMs and Narrative-Structured Text Embeddings. *Proceedings of the 17th ACM Web Science Conference 2025*, 326–337. <https://doi.org/10.1145/3717867.3717868>

Stojetz, W., Ferguson, N. T. N., Baliki, G., Díaz, O., Elfes, J., Esenaliev, D., Freudenreich, H., Koebach, A., Abreu, L., Peitz, L., Todua, A., Schreiner, M., Hoeffler, A., Justino, P., & Brück, T. (2022). The Life with Corona survey. *Social Science & Medicine*, 306, 115109. <https://doi.org/10.1016/j.socscimed.2022.115109>

Book chapters

Elfes, J. (in press). AI and communication networks. In M. Bastos & L. Rossi (Eds.) *Handbook of Social and Communication Networks*. Edward Elgar Publishing.

In progress

Elfes, J., Bastos, T., & Aiello, L. M. On Narrative: The Rhetorical Mechanisms of Online Polarisation [under review]

Elfes, J., & Bastos, M. Structuralist LLM: A Framework for Computational Narrative Analysis [under review]

Weiffen, D., Baliki, G., Elfes, J., & Brück, T. Cash and Cohesion in Crisis: On the Impacts of Anticipatory Cash Transfers in IDP Camps in South Sudan during Floods [under review]

PRESENTATIONS

Conferences

- Political Science Association Ireland Annual Conference (2025)
- International AAAI Conference on Web and Social Media, Detox Workshop (2025)
- ACM Web Science Conference (2025)
- Political Science Association Ireland Annual Conference (2024)

Workshops

- Cultural Memory in Online Public Discourse, SoMe4Dem Project (2025)
- Monash-Warwick-Zurich-CEPR Text-as-Data Workshop (2024)
- Internet Research with Foundation Models?, University of Amsterdam (2024)
- Data Natives, City St. George's, University of London (2024)

TEACHING

- **Co-Instructor** at University College Dublin
Theories of Media and Communication (IS20160) Autumn 2025
- **Co-Instructor** at University College Dublin
Communication Theory (IS40880) Autumn 2025
- **Teaching Assistant** at University College Dublin
Machine Learning Foundations (IS41070) Summer 2024
- **Tutor** at University College Dublin
Data Science in Practice (COMP30780) Spring 2024

SCHOLARSHIPS

Government of Ireland Postgraduate Scholarship , Irish Research Council Highly competitive, individual, and prestigious awards for excellent research.	Nov 23–Okt 27
DDSA Visit Grant , Danish Data Science Academy	Mar 25–May 25
DDSA Visit Grant , Danish Data Science Academy	Aug 24–Nov 24
MAECI Scholarship , Italian Ministry of Foreign Affairs and International Cooperation	Jan 23–Sep 23
MAECI Scholarship , Italian Ministry of Foreign Affairs and International Cooperation	Jan 22–Sep 22

SKILLS

Programming: Python (PyTorch, TensorFlow, Scikit-learn, transformers), R, SQL, Jinja

Frameworks: Linux, Git, GCP, Kubeflow

LANGUAGES

German: Native

English: C2

Italian: C1

French: A1