

## 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, GPA: 4.0/4.0

Padova, Italy

2021–2023

- Thesis: Machine learning-based image forgery detection;

### Heidelberg University

B.Sc. Physics, GPA: 3.3/4.0

Heidelberg, Germany

2016–2021

- Thesis: Hydropheric tracers in environmental physics;

## EXPERIENCE

### Wayfair

*Intern*

Worked as a Machine Learning Scientist in the Scam and Fraud Detection Team on Image Recognition Software.

Berlin, Germany

Mar 23–Sep 23

- Designed and tested image-based features for scam detection.
- Maintained model infrastructure and deployed new features to production.
- Build pipelines for model training.
- Experimented with different models.

### UN Office for the Coordination of Humanitarian Affairs

*Research Project Manager*

Led data collection for the evaluation of the impact of UN support on health and food security in displacement camps.

South Sudan

Aug 22–Sep 22

- Led my team in conducting 4000 interviews over 9 weeks.
- Trained and supervised 15 staff and managed communication with the displaced communities.
- Ensured data quality by conducting regular quality checks and giving feedback to the enumerators.

### International Security and Development Center (ISDC)

*Junior Researcher*

Contributed to an impact evaluation for the FAO.

Berlin, Germany

Mar 22–Jun 22

- Aggregated external data sources and matching them to a survey.
- Analysed conflict event data as well as satellite data on weather and land conditions.
- Produced graphs, maps, and tables used in the final paper.

### International Security and Development Center (ISDC)

*Research Assistant*

Provided statistical analysis for several projects.

Berlin, Germany

Mar 21–Jul 21

- Cleaned and analysed survey data on gendered dimensions of displacement and the impact of COVID-19 around the world.
- Produced graphs and tables for the final scientific papers [2].

### Institute for Peace Research and Security Policy (IFSH)

*Intern*

Hamburg, Germany

Jan 21–Feb 21

Simulated the emission spectrum of nuclear weapons to improve detection systems [3].

### International Security and Development Center (ISDC)

*Intern*

Berlin, Germany

Sep 20–Dec 20

Contributed statistical analysis to different projects.

## PUBLICATIONS

- [1] J. Elfes, “Mapping News Narratives Using LLMs and Narrative-Structured Text Embeddings”, en, in *Proceedings of the 17th ACM Web Science Conference 2025*, New Brunswick, NJ, USA: ACM, 2025.
- [2] W. Stojetz, N. T. N. Ferguson, G. Baliki, O. Díaz, J. Elfes, D. Esenaliev, H. Freudenreich, A. Koebach, L. Abreu, L. Peitz, A. Todua, M. Schreiner, A. Hoeffler, P. Justino, and T. Brück, “The Life with Corona survey”, *Social Science & Medicine*, vol. 306, Aug. 2022.
- [3] M. Kütt, J. Elfes, and C. Fichtlscherer, “Fetter Model Revisited: Detecting Nuclear Weapons 30 Years Later”, in *Proceedings of the INMM ESARDA Joint Virtual Annual Meeting*, Aug. 2021.

## 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

## 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

## 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 24
- **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

## INTERESTS

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Theatre & Sport

*I am acting and directing in theatre projects and I am a passionate climber and aerial silk acrobat.*