Timothée **Schmude**

PhD Student · Lecturer

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Summary

PhD student in explainable and contestable AI. I'm interested in how AI systems are integrated into society and in how explanations can help people understand and challenge these systems. To this end, I develop explanation designs and conduct interviews and workshops. My latest projects look at the information needs of AI novices, explanations for group decision-making, and regulation of explainable and contestable AI.

Education

University of Vienna
Vienna, Austria

PhD in Computer Science: Explainable AI — *Since Mar. 2022*

- Thesis: "Explainability and Contestability for the Responsible Use of Public Sector AI" (working title)
- Research visit at Télécom Paris, France, from 10/24 to 02/25 on the topic of explainability and contestability in AI regulation.

University of Cologne
Cologne, Germany

M.A. in Professional Writing — *Oct. 2019 - Apr. 2022*

- Thesis: "Texts of the Future: How Writing Machines Are Changing Literature"

University of Cologne
Cologne, Germany

M.A. in Information Processing — *Oct. 2018 - Apr. 2021*

- Thesis: "Information Extraction from Legal Documents: An Analysis of Performance and Interpretability"

University of Bayreuth
Bayreuth, Germany

B.A. in Media Studies — *Oct. 2015 - Oct. 2018*

- Thesis: "On the Form and Necessity of Digital Ethics in Cybernetics"

Work Experience

Télécom Paris
Palaiseau, France

Research stay — *Oct. 2024 – Jan. 2025*

- **Empirical Qualitative Research**: Prepare and conduct an interview study with experts on the regulation of AI.
- **Research Collaboration**: Working in a multidisciplinary team on study design and submission of findings to a peer-reviewed conference.
- **Stipend recipient**: Granted by Campus France to conduct research on AI in France for three months.

University of Vienna
Vienna, Austria

Research Project Assistant — *Since Mar. 2022*

- **Empirical Qualitative Research**: Conduct interview studies to learn about people's understanding of explanations about algorithmic systems and identify their information needs.
- **Interdisciplinary Research Approaches**: Connect explainable AI approaches to theories from Social Sciences and Law.
- **Lecturing:** Lecturing and grading in courses on Human-Computer Interaction and Visualization. Profile: ufind.univie.ac.at.

University of Cologne
Cologne, Germany

Lecturer — *Oct. 2021 – Mar. 2022*

- **Course Implementation**: Create and prepare weekly lectures for 25 students on Deep learning architectures and applications.
- **Programming Exercises in Python**: Build notebooks and programming problems using Deep Learning library TensorFlow.

molytix GmbH
Cologne, Germany

Software Developer — *May 2021 – Mar. 2022*

- **Data Analysis in C#**: Develop .NET web-app for calculation, analysis, and presentation of ticketing data.
- **Product Development with GTFS Data**: Build product prototypes for analysis of transit specification data.
- **Homepage Launch:** Design, plan, and launch new company homepage molytix.com.

Fraunhofer-Institute IAIS
St. Augustin, Germany

Working student — *Mar. 2020 – Apr. 2021*

- **Court Sentence Database:** Develop prototype for document database with automated information extraction from court sentences using ElasticSearch, Python, BERT, and Dash in collaboration with legal scholars.

Computing Centre, University of Cologne
Cologne, Germany

Hostmaster — *Dec. 2018 – Jan. 2020*

- **Network Management:** Administrate university network, hardware components, and user records using Linux and Vim.

Publications

Information That Matters: Exploring Information Needs of People Affected by Algorithmic Decisions

International Journal of Human-Computer Studies

TIMOTHÉE SCHMUDE, LAURA KOESTEN, TORSTEN MÖLLER, AND SEBASTIAN TSCHIATSCHEK

2024

- In: International Journal of Human-Computer Studies, Vol. 193, 2024. doi.org/10.1016/j.ijhcs.2024.103380

Spotlight Explainable AI: A Discussion of Selected Use Cases

Juridikum

ELISABETH PAAR, TIMOTHÉE SCHMUDE, CANSU CINAR

2024

- In: Juridikum. Zeitschrift für Kritik, Recht, Gesellschaft, 2024. doi.org/10.33196/juridikum202402024401

QUARE: Workshop on Measuring the Quality of Explanations in Recommender Systems

RecSys '23, Singapore

O. INEL, N. MATTIS, M. NORKUTE, A. PISCOPO, T. SCHMUDE, S. VRIJENHOEK, AND K. BALOG

2023

- In: Proceedings of the 17th ACM Conference on Recommender Systems, 1241–1243. doi/abs/10.1145/3604915.3608754

On the Impact of Explanations on Understanding of Algorithmic Decision-Making

FAccT '23, Chicago

TIMOTHÉE SCHMUDE, LAURA KOESTEN, TORSTEN MÖLLER, AND SEBASTIAN TSCHIATSCHEK

2023

- In: Proceedings of the ACM FAccT '23 Conference, Chicago, IL, USA, 959–970. doi.org/10.1145/3593013.3594054

Applying Interdisciplinary Frameworks to Understand Algorithmic Decision-Making

CHI '23, Hamburg

TIMOTHÉE SCHMUDE, LAURA KOESTEN, TORSTEN MÖLLER, AND SEBASTIAN TSCHIATSCHEK

2023

- AI literacy workshop paper at CHI '23. doi.org/10.48550/arXiv.2305.16700

Program or Be Programmed: Teaching Artificial Intelligence in the Digital Humanities

AI Campus, Berlin

TIMOTHÉE SCHMUDE AND CLAES NEUEFEIND

2022

- In: D. Mah & C. Torner (Eds.): Anwendungsorientierte Hochschullehre zu Künstlicher Intelligenz, p. 32–43. doi.org/10.5281/zenodo.7319832

Smart Sentencing: Concept of a Partly Automated Court Sentence Database

Legal Revolutionary, Frankfurt

FRAUKE ROSTALSKI, TIMOTHÉE SCHMUDE, MALTE VÖLKENING AND JIN YE

2021

- In: Legal Revolutionary, S. 166–178. lrz.legal/de/lrz/smart-sentencing

Presentations

AI for the Judiciary

Wiesbaden, Germany

KEYNOTE SPEAKER

Oct. 2023

- Introductory presentation to AI and explainability at workshop organized by the Hessian Ministry of Justice.

FAccT '23

Chicago, US

PAPER PRESENTATION

Jun. 2023

- Presentation of accepted paper: "On the Impact of Explanations on Understanding of Algorithmic Decision-Making".

Lecture Series "Democracy and Digital Revolution"

Vienna, Austria

PRESENTER

Dec. 2022

- Presentation of empirical findings and current work in project "Interpretability and Explainability as Drivers to Democracy".

Extracurricular Activity

AI and Human Rights Working Group: Young Section

Vienna, Austria

MEMBER

Since Nov. 2023

- Collaboration on publications and projects in the intersection of law and AI, funded by the Austrian Research Society.

Vienna Aid Organization

Vienna, Austria

VOLUNTEER TEACHER

Dec. 2023 – Sep. 2024

- Weekly supervision and assistance in children's homework groups.

AI Campus Digital Learning Platform

Cologne, Germany

FELLOWSHIP RECIPIENT

Sep. 2021 - Sep. 2022

- Fellowship program to integrate and evaluate educational resources for AI and connect AI lecturers throughout Germany.

Skills

Language

LEVELS AND ACQUISITION

- German: native. English: C1 (working language, university courses). French: B1-B2 (university courses, research stay in France).