

Lucas Lange

RESEARCHER · PHD STUDENT

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Experience

Leipzig University & ScaDS.AI Dresden/Leipzig

RESEARCHER (WISSENSCHAFTLICHER MITARBEITER)

Leipzig, Germany

Mar. 2022 - Present

- Research in "Privacy-Preserving Data Analysis (Machine Learning)" as a PhD student.
- Conducting and supervising computer science courses at Leipzig University, especially in the field of databases and data science.
- ScaDS.AI affiliation within the scope of my position at Leipzig University.

Australian National University (ANU)

VISITING RESEARCHER

Canberra, Australia

Feb. 2024 & Feb. 2025

- DAAD travel grant for project-related personal exchange with ANU in 2024 and 2025.
- Project: "Data integration and federated learning for individual-privacy applications", Project-ID: 57701258.

InfAI - Institute for Applied Informatics

RESEARCH ASSISTANT (WHK)

Leipzig, Germany

Oct. 2019 - Feb. 2020

- Working on the ShapBiRd project, an effort to create a linked data infrastructure and workflow for the institute's bibliography.

eccenca GmbH

SOFTWARE DEVELOPER

Leipzig, Germany

Jun. 2018 - Apr. 2019

- Specification and implementation of a visual editor for linked data knowledge graphs (Bachelor Thesis).

InfAI - Institute for Applied Informatics

STUDENT ASSISTANT (SHK)

Leipzig, Germany

Jul. 2017 - Apr. 2018

- Assisting in the open-source SlideWiki EU Project and tutoring an agile software engineering student project at Leipzig University

Education

Leipzig University

PH.D. IN COMPUTER SCIENCE

Leipzig, Germany

Mar. 2022 - Present

- Topic: Privacy-Preserving Data Analysis (Machine Learning).

Leipzig University

M.SC. IN COMPUTER SCIENCE

Leipzig, Germany

Apr. 2019 - Jan. 2022

- Thesis: Privacy-Preserving Detection of COVID-19 in X-Ray Images (at ScaDS.AI Dresden/Leipzig).

Université Grenoble Alpes (UGA)

ERASMUS+—M.SC. IN COMPUTER SCIENCE

Grenoble, France

Sep. 2020 - Jun. 2021

- Courses in Machine Learning and Robotics.

Leipzig University

B.SC. IN COMPUTER SCIENCE

Leipzig, Germany

Oct. 2015 - Mar. 2019

- Thesis: Visual Editor Based on SHACL Shapes (at eccenca GmbH).

Publications

Generating Synthetic Health Sensor Data for Privacy-Preserving Wearable Stress Detection

Jan. 2024

LUCAS LANGE AND NILS WENZLITSCHKE AND ERHARD RAHM, IN: ARXIV PREPRINT (UNDER REVIEW)

arxiv.org/abs/2401.13327

github.com/luckyos-code/Privacy-Preserving-Smartwatch-Health-Data-Generation-Using-DP-GANs

Privacy-Preserving Sentiment Analysis on Twitter

Sep. 2023

FELIX VOGEL AND LUCAS LANGE, IN: SKILL 2023

[accepted, not yet published](#)

github.com/felix2246/dp-sent-analysis-twitter

Privacy-Preserving Stress Detection Using Smartwatch Health Data

Sep. 2023

LUCAS LANGE, BORISLAV DEGENKOLB AND ERHARD RAHM, IN: 4. INTERDISCIPLINARY PRIVACY & SECURITY AT LARGE WORKSHOP, INFORMATIK 2023

doi.org/10.18420/inf2023_66

github.com/BDegenkolb/Privacy-Preserving-Stress-Transformer

Privacy at Risk: Exploiting Similarities in Health Data for Identity Inference

Aug. 2023

LUCAS LANGE AND TOBIAS SCHREIEDER AND VICTOR CHRISTEN AND ERHARD RAHM, IN: ARXIV PREPRINT (UNDER REVIEW)

arxiv.org/abs/2308.08310

github.com/tobiasschreieder/smartwatch-dtw-attack

Privacy in Practice: Private COVID-19 Detection in X-Ray Images

Jul. 2023

LUCAS LANGE, MAJA SCHNEIDER, PETER CHRISTEN AND ERHARD RAHM, IN: 20TH INTERNATIONAL CONFERENCE ON SECURITY AND CRYPTOGRAPHY (SECRYPT 2023)

doi.org/10.5220/0012048100003555

github.com/luckyos-code/mia-covid

Privacy in Practice: Private COVID-19 Detection in X-Ray Images (Extended Version)

Nov. 2022

LUCAS LANGE, MAJA SCHNEIDER, PETER CHRISTEN AND ERHARD RAHM, IN: EXTENDED ARXIV PREPRINT OF SECRYPT 2023 PAPER

arxiv.org/abs/2211.11434

github.com/luckyos-code/mia-covid

SentArg: A Hybrid Doc2Vec/DPH Model with Sentiment Analysis Refinement

Sep. 2020

CHRISTIAN STAUDTE AND LUCAS LANGE, IN: CLEF 2020 WORKING NOTES

ceur-ws.org/Vol-2696/paper_191.pdf

github.com/luckyos-code/ArgU