

David Hanny

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SUMMARY

I'm a data scientist currently working in geosocial media research. Curious about methodology, interested in machine learning, social phenomena and geoinformatics.

WORK EXPERIENCE

Junior Researcher | IT:U - Interdisciplinary Transformation University Austria | Linz Oct. 2024 - present

- Part of the Geosocial AI group, focusing on developing spatially explicit multimodal machine learning methods for social sensing data. This includes geo-referenced social media posts and mobile phone data in the context of disaster management, epidemiology and climate change.
- Establish workflows and help build up a new research group at a new University.
- Software development in Python, teaching and outreach support.

Researcher | Z_GIS - Department of Geoinformatics | University of Salzburg Dec. 2022 - Sep. 2024

- Development of machine learning methods for analysing and modelling multimodal social sensing data.
- Wrote 3 peer-reviewed first-author papers and 2 additional papers with colleagues.
- Research, project management and technical work for a total of 4 third-party-funded projects.
- Software development for data acquisition and processing with Python and Java; infrastructure management.

Data Science Consultant | Axians ICT Austria GmbH | Salzburg Jul. 2021 - Nov. 2022

- Concepted and implemented AI applications using Python, Java, JavaScript and TypeScript.
- Projects include a tool for computing the CO2 emissions of construction projects and an application for mapping orders to the internal product groups of a major Austrian industrial company.
- Developed a variety of database management tools for Postgres and Oracle databases, e.g. for automatic testing, OAuth authorisation and easier schema administration.

Data Science Expert | correlate analytics gmbh | Salzburg Jun. 2022 - Aug. 2022

- Produced about 100 quiz items for the assessment of data science knowledge on competence levels five and six of the European Qualifications Framework.

Freelance Data and Business Journalist | Various media outlets | Vienna 2017 - 2021

- Before becoming a data scientist, I worked as a data and business journalist for various media outlets in Vienna alongside my bachelor studies. Among others, I published print and online articles in the Viennese investigative magazine Dossier, the German edition of Forbes and the former daily newspaper Wiener Zeitung. My work strongly focused on technology, business and scripted data journalism using Python. A comprehensive list of published examples can be found [here](#).

Technical Internships | ÖBB, VAEB, EPS | Vienna, Lower Austria 2013 - 2017

- Alongside my diploma in information technology, I completed several technical internships. I conducted software testing for the Austrian railway company ÖBB, worked in IT support for the former insurance company VAEB and did marketing for the infrastructure provider EPS Electric Power Systems GmbH.

EDUCATION

PhD in Computational X | IT:U – Interdisciplinary Transformation University Austria 2024 - present

- Research on spatially explicit multimodal machine learning for social sensing as one of the University's first students.

PhD in Applied Geoinformatics | University of Salzburg 2024 - 2024

- Started my research on spatially explicit multimodal machine learning for social sensing before switching to IT:U.
- Coursework in geovisualisation, cartography, spatial statistics and scientific writing.
- Student representative, part of the Digital and Analytical Sciences faculty council.

MSc in Data Science | University of Salzburg 2020 - 2023

- Thesis: *Spatiotemporal Topic-Sentiment Modelling of Social Media Data with Neural Networks*.
- Specialisation in statistical methods, big data algorithms and image processing.
- Student representative, part of the curriculum and admissions committees.
- Lots of voluntary coursework in computer science, mathematics and philosophy of science.

BA in Journalism and Media Management | FH Vienna of WKW 2017 - 2020

- Specialisation in data journalism and investigative research.
- Interdisciplinary mix of communication science, media technology, economics, business administration, political science and law.
- Exchange semester in Antwerp, Belgium.

Matura (Diploma) in Information Technology | HTL Krems 2012 - 2017

- Software development with C#, C, JavaScript and PHP.
- Systems engineering, media technology, hardware programming, elective economics and law.

SKILLS

Technical Skills	Python, R, Java, Julia, JavaScript, TypeScript, C++, C#, SQL, PL/SQL, HTML, CSS, Linux, LaTeX, QGIS, ArcGIS
Foundational Skills	Data mining, machine learning, software engineering, data visualisation, writing, project management, IT systems management
Languages	German (mother tongue), English (C1), French (B1), Russian, Dutch (A1)

SCIENTIFIC PUBLICATIONS

Hanny, D., Schmidt, S., and Resch, B. (2024). Active Learning for Identifying Disaster-Related Tweets: A Comparison with Keyword Filtering and Generic Fine-Tuning. In Arai, K., editor, *Intelligent Systems and Applications*, pages 126–142, Cham. Springer Nature Switzerland

Hanny, D. and Resch, B. (2024b). Multimodal Geo-Information Extraction from Social Media for Supporting Decision-Making in Disaster Management. *AGILE: GIScience Series*, 5:1–8

Hanny, D. and Resch, B. (2024a). Clustering-Based Joint Topic-Sentiment Modeling of Social Media Data: A Neural Networks Approach. *Information*, 15(4):200

Hanny, D. (2023). Spatiotemporal topic-sentiment modeling of social media data with neural networks. Master's thesis, University of Salzburg, Salzburg