

# David Hanny

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## SUMMARY

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

## WORK EXPERIENCE

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**Researcher** | Z\_GIS - Department of Geoinformatics | University of Salzburg Dec. 2022 - present

- Development of novel machine learning methods for analysing and modelling geospatial data such as geo-referenced social media posts or cellular network data in the context of disaster management and epidemiology.
- Implementation and evaluation of neural networks and NLP pipelines. Software development for data acquisition and data processing with Java and Python. Infrastructure management.
- Started as a student assistant, doctoral researcher since March 2024.

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

- Conception and implementation of AI applications with Python, Java, JavaScript and TypeScript.
- Completed 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.
- Development of 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

- Production of 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 summer 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

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**PhD in Applied Geoinformatics** | University of Salzburg 2024 - present

- Thesis topic: *Spatially Explicit Multimodal Machine Learning of Geospatial Data for Social Sensing*
- Coursework in 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, 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 subject economics and law.

## SKILLS

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

## SCIENTIFIC PUBLICATIONS

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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