Daniele Gadler

Senior Data Scientist

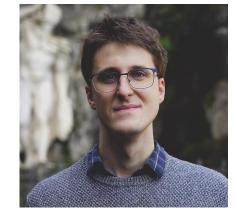
Citizenship: Italian

Date of birth: 05.03.1995

Address: Frankfurt am Main, Germany Email address: daniele.gadler@gmail.com
Phone number: (+0049) 015228518323
Website: https://danyele.github.io

Github Profile: https://github.com/DanyEle

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WORK EXPERIENCE

• One Data GmbH. Senior Data Scientist. Frankfurt am Main, Germany

April 2023 - now

Data Scientist. Frankfurt am Main, Germany

March 2021 - now

- Designed and implemented productive data science solutions in Spark, SQL, Python and the ONE DATA platform
- Developed a tool for supply chain optimization for a large German pharmaceutical company URL
- Carried out DataOps, data engineering, data modeling, data visualization to fulfill the above goal
- Created time series and simulation analyses for scenario-based production of medicines
- Led customer communication and management, held regular agile sprints' planning and requirements' analysis

• Südtiroler Informatik AG. Data Scientist. Bozen, Italy

October 2019 - January 2021

- Developed and led data science and machine learning projects in SAS, SAS Viya, Microsoft Azure and Python
- Led a project for the **predictive maintenance** of South Tyrol's **road infrastructure** from **Google Street View** images
- Led the development of the AgriML project for farmers' crop funding automation from satellite images
- Created time series analysis for monitoring and preventing the spread of Covid-19 in South Tyrol, Italy
- Prototyped a tool to predict road traffic trends in South Tyrol from IoT and weather data. Repo's URL

• National Research Council of Italy. Master's Research Fellow. Pisa, Italy.

March 2019 - October 2019

- Proposed, implemented and validated experimentally "Federated Quantization" in PyTorch and PySyft
- Introduced quantization in federated learning and reduced the amount of network data transmitted by 8.70x, while still maintaining a high model accuracy for **Recurrent Neural Networks**
- Contributed to the "PySyft" open-source framework for privacy-preserving federated learning. PySyft's URL

• Free University of Bolzano. Research Data Scientist. Bozen, Italy

February 2018 - March 2018; July 2018 - September 2018

- Developed a distributed tool in **R** and **Java Hadoop** for analyzing logs of the **ALMA astronomical observatory** in Chile using Hidden Markov Models to model system behavior and identify erroneous states. <u>HMM's Git URL</u>

EDUCATION

• Scuola Superiore Sant'Anna and University of Pisa. Msc. in Computer Science and

Networking - Specialization in Data Science and Machine Learning. Pisa, Italy.

September 2017 - October 2019

Two-year Inter-university Master's programme at the honors school "Scuola Superiore Sant'Anna".

MSc thesis title: "The Impact of Recurrent Neural Network Quantization on Federated Learning", published in the "Information Sciences" Journal.

Awards: Top 1. Master's student in 2018 and top 1. 2019 graduate by grades, least graduation time and exams.

Graduation grade: 110 cum laude / 110.

Exams' GPA: 29.74 / 30.

• **Technische Universität Kaiserslautern**. Bsc. in Computer Science - Erasmus+ Exchange Year.

Kaiserslautern, Germany

October 2016 - July 2017

Exchange **Erasmus+** student attending Bsc. and Msc. university courses in German.

Exams' GPA: 1.63 / 4.00.

• Free University of Bolzano. Bsc. in Computer Science and Engineering. Bozen, Italy.

October 2014 - July 2017

Three-year trilingual study programme (attended lectures in German, English, Italian). Attended an internship in China, studied for 1 year abroad in Germany and graduated within 2 years and 9 months.

BSc thesis title: "Mining Data to Model System Usage with Hidden Markov Models", published at the ESEM Conference.

Graduation grade: 106 / 110.

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SKILLS

- Languages: Italian (Native); English (C2, Fluent); German (C1+, Business fluent); Chinese (B1, Basic).
- Data Science skills: Excellent: Python, Pandas, Advanced: Numpy, PostgreSQL, Spark, Scikit-Learn, SparkSQL, Flask, SAS, SAS Viya, R. Familiar: PyTorch, Keras, Hadoop.
- Programming skills: Good: Java, C++, C, C#, web programming (Javascript, HTML, CSS), REST APIs.
- **Soft and Delivery Skills**: Teamwork, agile project management, stakeholder and customer management, leadership and mentoring, deadline and priority management.
- Cloud computing: Microsoft Azure

PUBLICATIONS

- "Neural Network Quantization in Federated Learning at the Edge". October 2021. "Information Sciences" Journal. Volume 575, Pages 417-436.
- "Mining Logs to Model the Use of a System". November 2017. ACM/IEEE ESEM '17. Toronto, Canada.
- "Bringing the Cloud to Rural and Remote Areas via Cloudlets". November 2016. ACM DEV '16.

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AWARDS

- 2020, IDC Award Sustainable Urban Planning and Administration: Awarded use of machine learning and satellite images for transforming the process of assigning farming grants to rural communities in South Tyrol.
- 2020, Best Graduate Award Msc. in Computer Science and Networking (€1500). Scuola Superiore Sant'Anna: Top 1. graduate based on the graduation and exam grades and least time to graduate.
- 2018, Best Student Award Msc. in Computer Science and Networking (€2000). Scuola Superiore Sant'Anna: Top 1. first-year student based on exam grades and number of exams passed.
- 2016, CRCC Asia Italy scholarship award for an internship in China at the Mullen Lowe Profero company