Daniele Gadler

daniele.gadler@yahoo.it

+0039 3476524393

https://www.linkedin.com/in/daniele-gadler

http://www.github.com/danyele

http://danyele.github.io

Personal Information

Date of birth: 05.03.1995.

Citizenship: Italian.

Address (IT): Via Padre Eusebio Chini 1, Trento(TN). 38123. Italy.

Address (DE): Neuburgerstraße 31b. Passau, Bayern. 94032. Germany.

Education

- September 2017 – October 2019: **Scuola Superiore Sant'Anna and University of Pisa**. TeCIP, Department of Computer Science. Master's in Computer Science and Networking. 110 cum laude/110. GPA: 29.74/30.00. **2020 Best graduate award. 2018 Best 1st year student performance award.**
- October 2016 – July 2017: **Technische Universität Kaiserslautern**. Department of Computer Science. Bachelor's in computer science in German. Exchange Student through the Erasmus+ program. GPA: 1.63/4.00.
- October 2014 – July 2017: **Free University of Bolzano-Bozen.** Faculty of Computer Science. Bachelor's in Computer Science & Engineering. Graduation grade: 106/110.

Work Experience

- October 2019 – present: **Data Scientist. SIAG - Südtiroler Informatik AG.** Bolzano, Italy.
  - Responsible for Artificial Intelligence projects being carried for the Autonomous Province of Bolzano by SIAG
  - Creation of PoC prototypes demonstrating the impact of Artificial Intelligence solutions for the Autonomous Province of Bolzano.
- March – October 2019: **Master Thesis Research Student. National Research Council.** Pisa, Italy.
  - Proposed "Federated Quantization", a methodology introducing quantization at the client and server level in federated learning to reduce the amount of data transmitted up to 8.70x using Alternating Quantization, while still maintaining a high model accuracy for Recurrent Neural Networks.
- July – September 2018: **Research Data Scientist. Free University of Bolzano-Bozen**. Faculty of Computer Science.
  - Development of a distributed and parallel tool for analyzing logs of the ALMA observatory to identify system errors and proposing system optimizations through Hidden Markov Models modelling of semi-structured logs.
- February – March 2018: **Research Data Scientist. Free University of Bolzano-Bozen**. Faculty of Computer Science.
  - Development of an automatized tool for the creation of Hidden Markov Models based on logs of developers' interactions with the Visual Studio IDE.
- July 2017 – September 2017: **Research Assistant at the Technische Universität Kaiserslautern.** Department of Computer Science**.** Distributed Computer Systems Groups (DISCO).
  - Theoretical and experimental comparison of state-of-the-art Wi-Fi devices fingerprinting techniques with physical-layer features.
- April 2016 – September 2016: **Tutor for the "Advanced Programming" Course. Free University of Bolzano-Bozen.** Faculty of Computer Science**.**
  - Support for students attending the "Advanced Programming" course in carrying out assignments, deepening course content and preparing for the exam. Focus on the "Java" programming language.
- February – March 2016: **Internship at Mullen Lowe Profero. Beijing, China**
  - Development of websites' plugins, drafting and implementation of test plans and code. Organization of distributed websites' migrations and code refactoring.
- March – December 2015: **Research Fellow. Free University of Bolzano-Bozen.** Faculty of Computer Science**.**

-   Development of a distributed cloud system for developing countries based on Raspberry-PI mini-computers. Identification of issues and changes responsible for energy consumption in ART Android Virtual Machine.
-   June 2014 – March 2015: **Junior Programmer, Flying Squirrel Entertainment.**
    -   Part of the development team for the "Battle Cry of Freedom" videogame. www.fsegames.eu
-   July – August 2013: **Summer Research Intern, FBK. Webvalley. Castello di Fiemme (TN).**
    -   Creation of a 3D NanoWebGIS interface for associating 2D/3D bioimages with mathematical models to identify changes in cells.

Publications:

-   *"The Impact of Recurrent Neural Network Quantization on Federated Learning"*. **Master's thesis** for the MSc in Computer Science and Networking. University of Pisa and Scuola Superiore Sant'Anna. October 2019.
-   "*Mining Logs to Model the Use of a System*". **ACM/IEEE ESEM '17**. International Symposium on Empirical Software Engineering and Measurement. Toronto, Canada. November 2017.
-   "*Bringing the Cloud to Rural and Remote Areas via Cloudlets*". **ACM DEV '16**. Proceedings of the 7th Annual Symposium on Computing for Development. Nairobi, Kenya. November 2016.

Languages:

Self-assessment	Understanding				Speaking				Writing	
European level (*)	Listening		Reading		Spoken interaction		Spoken production			
Italian	Mother-tongue		Mother-tongue		Mother-tongue		Mother-tongue		Mother-tongue	
English	C2	Proficiency	C2	Proficiency	C2	Proficiency	C2	Proficiency	C2	Proficiency
German	C1	Advanced	C2	Advanced	C2	Advanced	C1	Advanced	C1	Advanced
Chinese	A2	Elementary	B1	Elementary	B1	Elementary	B1	Elementary	A2	Elementary

Awards and Grants:

-   2020. **Best Graduate Award (€1500) - MSc in Computer Science and Networking. Scuola Superiore Sant'Anna:** Top 1. graduate awarded the "Best Graduate Award" for graduates from cohort 2017/2018 graduating in academic year 2018/2019 based on the best graduation grade, exam grades (GPA) and least amount of time spent to graduate.
-   2018. **Best Student Performance Award (€2000) - MSc in Computer Science and Networking. Scuola Superiore Sant'Anna:** Top 1. student awarded the "Best student performance award" in the academic year 2017-2018 for best grades' average (GPA) and number of exams passed.
-   2016-2017. **Erasmus+ Scholarship**: selected at the Faculty of Computer science of the Free University of Bolzano-Bozen for one year abroad at the Technische Universität Kaiserslautern for academic achievements and motivation.
-   2015. **CRCC Asia Italy Scholarship Award**: selected among more than 400 candidates in Italy for an internship in China for academic achievements, technical competence and motivation.

Skills:

Personal Skills:
-   **Dedication and committment**: acquired by working on research and jobs in parallel to my academic career, and by studying at the school of excellence "Scuola Superiore Sant'Anna" during my Master's. Obtained the best graduate and best student award as a result of my efforts.
-   **Adaptability**: acquired by working in a completely new environment in China as well as studying in German as an Italian mother-tongue at the Technische Universität Kaiserslautern.

Organisational Skills
-   **Teamwork attitude**: Acquired by working within research project groups at the university and as part of the Business Intelligence Center of Competence at Südtiroler Informatik AG
-   **Leadership**: acquired by leading student group projects at the university, and by leading the development of AI projects for the Autonomous Province of Bolzano at Südtiroler Informatik AG.

Technical skills
-   **Data Science programming**: Good knowledge of Python with Numpy, Pandas, Keras, PyTorch; R; SQL; SAS Viya, SAS 9.
-   **Machine Learning theory:** Acquired from scientific articles, books, courses "Data Mining" and "Machine Learning" from the University of Pisa and "Neural Networks" from Scuola Superiore Sant'Anna.

Trento, Italy. August 08, 2020

- **Other skills:** Java, Javascript, C#, C++, Cloud computing with Microsoft Azure.

Relational Skills:
- Sense of Humor
- Presenting

Habilitations and certificates:

- **2020, State habilitation as "Information Engineer" – section A. University of Trento.** 56/60.
- **2015, Zertifikat für Zweisprachigkeit der Provinz von Bozen.** German and Italian C1 Level.
- **2013, Certificate of Advanced English (CAE). University of Cambridge.** Grade A – C2 English Level

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