Daniele Dimonte

Software Developer · Mathematician (PhD)

Born 07.03.1990 in Viterbo
Italian citizen, C permit
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Curiosity is key

Software developer with over three years of industry experience in C#/.NET, Kotlin/Spring and Python, from desktop plugins to automated test suites. Trained in Domain-Driven Design and object-oriented architecture, with a PhD in mathematical physics as foundation: at ease with complex logic and algorithms, and quick to learn new domains.

Professional Experience

02.2026 – present
Data Scientist | *mylife Diabetescare, Burgdorf*
Innovation team · fixed-term project position via BNF (University of Bern)
- Develop testing tools for **digital twins** that simulate blood-glucose dynamics
- Port the internal test software for insulin-pump algorithms from **C** to **Python**, with automated **pytest** suites
- Prototyped an **occlusion-detection algorithm** combining insulin-delivery and continuous glucose monitoring (**CGM**) data

Tech: Python, pytest, NumPy, SciPy, pandas, Jupyter, C

03.2025 – 06.2025
System Architect & Software Developer | *Silberrücken AG, Bern*
Permanent position · ended for economic reasons after the company lost its client projects; Silberrücken AG ceased operations in early 2026
- Built a prototype **task-management application** in **Kotlin** and **Spring**, applying **Domain-Driven Design** and OOP principles
- Supported the company's preparation for an **ISO certification**
- Training in enterprise architecture (**TOGAF**) and team facilitation (**Theory U**, **Social Presencing Theater**)

Tech: Kotlin, Spring Framework, 11ty

10.2022 – 01.2025
Software Developer | *Acquedotto GmbH, Burgdorf*
- Designed and delivered **four Revit plugins** that automated repetitive design and drawing tasks for the planning team
- Worked independently across the full lifecycle: requirements with users, development, deployment and support
- Integrated the plugins with **MS Office** reporting and **Geberit BIM** data
- Set up versioning and **CI/CD** with **GitHub**

Tech: C#, .NET 7, .NET Framework, Windows Forms, MS Office Interop, GitHub

10.2021 – 09.2022
Career transition to software development
German courses, online courses in programming and the **BNF** qualification programme for university graduates (University of Bern), which led to the position at Acquedotto

10.2019 – 09.2021
Postdoctoral Researcher & Teaching Assistant | *University of Basel (Prof. C. Saffirio)*
- Developed mathematical models of **Fermi quantum gases** based on Hartree-Fock theory
- Led **international research collaborations** with partners in Germany, Italy and Switzerland, from first meeting to publication
- Teaching assistant for **four courses**: Quantum Mechanics, Analysis I, Kinetic Equations and a seminar in Harmonic Analysis

10.2015 – 09.2019
Doctoral Researcher | *SISSA, Trieste (Prof. M. Correggi)*
- Developed mathematical models of rapidly rotating **Bose-Einstein condensates**
- International collaboration with **Prof. P. Pickl** (LMU Munich)
- Elected **student representative** for the Geometry and Mathematical Physics group

Education

2015 – 2019
PhD in Mathematical Physics | *SISSA, Trieste*
Thesis: "Mathematics of the Bose Gas in the Thomas-Fermi Regime" · cum laude

2012 – 2015	**MSc in Mathematics** | *Sapienza University of Rome* Thesis: "Giant Vortices in Rotating Bose-Einstein Condensates" · 110/110 cum laude
2009 – 2012	**BSc in Mathematics** | *Roma Tre University, Rome* 110/110 cum laude · Tutor for Mathematical Analysis 4 (AM220)

Further Education

05.2026	**Supervised Machine Learning: Regression and Classification** | *DeepLearning.AI & Stanford University (Coursera)* Machine-learning fundamentals and predictive models in Python with NumPy, scikit-learn and TensorFlow
03.2025	**Social Presencing Theater** | *with Arawana Hayashi (Presencing Institute)* Practices of deep listening, co-sensing and co-creation to support change, innovation and resilience in teams

Publications and Talks

2016 – 2022	**3 peer-reviewed papers** | *J. Math. Phys. · Nonlinearity · Math. Phys. Anal. Geom.* 9 talks and posters at international conferences and seminars, incl. QMath 14 (Aarhus), Institut Mittag-Leffler (Stockholm) and LMU Munich

Skills

Programming	C#/.NET (7, Framework), Python, Kotlin, C, SQL (MariaDB)
Frameworks & tools	Spring, Windows Forms, MS Office Interop, pytest, 11ty
Practices	Object-oriented design, Domain-Driven Design, automated testing, CI/CD, TOGAF
Infrastructure	Git/GitHub, Docker, Linux servers (Debian, Fedora), Apache, Nextcloud
Languages	Italian (native) · English (C1) · German (B2/C1) · French (B1)

Engagement & Interests

- **Self-hosted Linux infrastructure** (Debian, Fedora): Nextcloud, mail server (Postfix, Dovecot), dockerized services, Apache reverse proxy with TLS
- **Community organiser** for SwissRPG: run the Bern role-playing community with bi-weekly sessions; coordinate city-wide events (Mega-Bern, ~100 participants) and convention programming (HeroFest)
- **Science outreach**: lectures on advanced mathematics for high-school students, Liceo Paolo Ruffini, Viterbo (2013–2019)
- **Lindy hop** dancer

References

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