Simone Maria Giancola

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Education

Bocconi University — Milan, ITA
MS Data Science – Data Science Major — *August 2021 – July 2023*

- GPA: 29.20 / 30
- **Ph.D.** Relevant coursework: Real Analysis (Optimal Transport), Graph Theory, Statistical Physics
- Relevant coursework: Advanced Machine Learning, Optimization, Stochastic Processes

Arizona State University — Phoenix, USA
Undegraduate Exchange Program — *January 2021 - May 2021*

- GPA 4.17 / 4.00
- **Graduate** relevant coursework: Quantum Computation, Modeling with Game Theory

Bocconi University — Milan, ITA
BS Economics, Management and Computer Science — *August 2018 - July 2021*

- Grade 110 Cum Laude / 110, Thesis: *"Value of Information in a Support Vector Machine, an exploration"*
- GPA 29.18 / 30 , **STEM GPA** 30.14 / 30
- Relevant coursework: Advanced Statistical Methods, Applied Mathematics, Machine Learning

Experience

Research Intern — Jun 2023 - Aug 2023
Institute of Science and Technology Austria (ISTA) — *Wien, AUT*

- Advisor: Prof. Marco Mondelli
- Statistical to Computational Gaps, Information Theory, Algorithms, Message Passing

ISTernship Summer Programme, ref. num. MPC-2023-01128, financed by ISTA, awarded by the OeAD

Visiting Student — March 2022 - Jun 2022
Bocconi Institute for Data Science — *Milan, ITA*

- Advisors: Professors Carlo Lucibello and Luca Saglietti, Computing Sciences Department
- Reading and self-study activities

Data Science Intern — January 2022 - March 2022
Santagostino Clinic — *Milan, ITA*

- Automated monthly report
- Identified customers' origin among services offered

Research Assistant — January 2021 - May 2021
Bocconi University, advisor: Professor Borgonovo E. — *Milan, ITA*

- Conducted research on extraction of a Value of Information measure from a SVM algorithm
- Experienced: programming, academic reading, thesis writing

Portfolio & Talks

Literature reviews and presentations on various topics (< 100 pages).

Compositional RBMs, a Bird's Eye view — March 2023

- Restricted Boltzmann Machines, Statistical Physics, Unsupervised Learning

A view on Percolation and Spin Systems — March 2023

- Percolation, Potts Model, Spin Systems, Random Cluster Model

Notes on the Neural Tangent Kernel — January 2023

- Deep Learning Theory, Neural Networks, Kernel Methods

Notions in Optimal Transport for Sigmoid Neural Networks — January 2023

- Deep Learning Theory, Optimal Transport, Neural Networks

Bipartite Matching & extensions — June 2022

- Linear Algebra, Graph Theory, Duality, Hungarian Algorithm, admissible transformation theory, Pfaffian orientations

Advanced Session, Harvard mini-course on Computation — January 2022

- Simulated Annealing, Statistical Mechanics, TSP

Other Self Study / Extracurriculars

Additional courses and/or longer writings (> 100 pages).

Probability Theory September 2022-January 2023
- Measure Theory, Stochastic Processes

Statistical Physics June 2022-Ongoing
- Machine Learning, Optimization, Physics, Neural Networks

Geometric Deep Learning June 2022-Dec 2022
- *First Italian School in Geometric Deep Learning*, **Funded MS student**
- Group Theory, Statistical Learning, Neural Networks, Topology

Bayesian MCMC probit analysis | co-authored December 2021
- Gibbs Instrumental Algorithm, Metropolis Random Walk Algorithm

Skills

Advanced Python, Latex, Sklearn, Numpy, Matplotlib, Scipy;
Certifications Deep Learning and AI for Medicine by DeepLearning.AI;
Intermediate Julia, Git, Unix, R, SQL, Matlab, C++, Keras, Tensorflow

Languages

English (proficient) TOEFL 108; Italian (mothertongue); Spanish (basic)

Profile & Interests

Passionate about Statistics, Mathematics and Computer Science. Result driven, detail oriented, and able to apply theoretical knowledge to solve real world problems. Fast learner, moved by curiosity. Good team player, while being able to work independently and take on responsibility.
In my spare time I enjoy: rugby, motorbike trips, podcasts, running.