

Renato Berlinghieri

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I am first year PhD student at MIT, in the department of Electrical Engineering and Computer Science, working in LIDS under the supervision of Professor Tamara Broderick. I am passionate about mathematics and computational sciences - in particular statistics and machine learning - from both a theoretical and an applied point of view.

Education

- **Massachusetts Institute of Technology** **Cambridge, MA**
PhD in Electrical Engineering and Computer Science *September 2021 - Present*
Research interests: Machine Learning, Bayesian inference, Optimization, Bayesian Nonparametrics.
- **Bocconi University** **Milan, Italy**
MSc in Data Science & Business Analytics (DSBA) *September 2019 - July 2021*
GPA: 30/30. Final grade: 110/110 with honors
Main subjects: *Statistical Learning, Probability, Bayesian Nonparametrics, Optimization, Stochastic Processes, Deep Learning.*
Final Thesis: *"Random measure approaches to Bayesian Nonparametrics"*.
- **Bocconi University** **Milan, Italy**
Bachelor in Economics, Management & Computer Science (BEMACS) *September 2016 - July 2019*
GPA: 30/30. Final Grade: 110/110 with honors.
Subjects: *Statistics, Algorithms, Machine Learning, Programming (Python, R, Julia), Economic Theory.*
Final Thesis: *"The neural basis of decision making" (Theoretical neuroscience. Supervisor: Professor Marinacci)*
- **University of California San Diego** **San Diego, CA**
Exchange Student. Major in Mathematics and Economics. *January 2019 - April 2019*
Term GPA: 4.00/4.00.
Subjects: *Stochastic Processes, Intro to Differential Equation, Complex Analysis, Intro to Numerical Linear Algebra.*

Experience

- **Bocconi Institute for Data Science and Analytics (BIDSA) & BayesLab** **Bocconi University, Milan**
Visiting Student. Supervisors: Professor Lijoi & Professor Pruenster *March 2020 - Present*
Analysis and presentation of both seminal and state-of-the-art papers to fellow students and professors. Main research interests: **statistical learning, Bayesian nonparametrics**, Bayesian computation, optimal transport applications to Bayesian statistics.
- **Artificial Intelligence Lab & Department of Decision Sciences** **Bocconi University, Milan**
Intern Research Assistant. Supervisor: Professor Marinacci *October 2018 - Present*
Reading and analysis of economics and statistics research papers. Research on projects trying to investigate **neuroeconomics** using statistical models for decision making and simulations (in *Julia* and *Python*). Personal study in advanced topics in mathematics and statistics.
- **IGIER Research Center** **Bocconi University, Milan**
Research Assistant *October 2017 - June 2018*
Development of data scraping and machine learning routines for economic research with *Python*. In particular, my research group used **Natural Language Processing** techniques to study sentiments towards immigration and racial discrimination in the US at the beginning of 20th century, in order to create a bridge with economics. Main activities: Web Scraping & pre-processing of data, data analysis, research on previous literature regarding NLP (e.g. LDA).
- **BrixiaMaTe APS** **Brescia, Italy**
Olympiads of mathematics Junior Tutor *April 2017 - March 2020*
Junior Instructor at national workshops for Maths Olympiads, in preparation for various national competitions. Main activities: **teaching lectures** about Algebra, Combinatorics, and Number Theory; **exercises selection** and organization of competitions' simulations (both for individuals and teams).

Honors, Certifications & Awards

- **Bocconi Graduate merit award**, issued to academic profiles considered to be amongst the top applicants for MSc.
- National finalist of *Italian Olympiads of Mathematics*:
 - individual competition, in 2014 and 2015 (**Bronze medal**)
 - team competition (captain), in 2013, 2014 (7th place overall), 2015 and 2016 (5th place)
- Finalist of *Championnat International des Jeux Mathématiques et Logiques*:
 - National final (Milan) from 2010 to 2016. Best standings: 3rd place (category C1, 2011), **2nd place** (category L2, 2016)
 - **International final** (Paris) in 2011 (8th place, category C1), and 2016 (**6th place**, category L2)
- Finalist of *Applied Mathematics Grand Prix*, 3rd place overall (Milan, 2016).
- Finalist of Mathematical Modelling competition in Perugia: **1st place** (category intermediate, 2014), 2nd place (category intermediate, 2015).

Extra-curricular Activities & Interests

- Former President and co-founder of **Computational Society for Bocconi Students** – the first student society at Bocconi University interested in Computer Science and Statistics.
- **Mentee at LeadTheFuture** - among the few Italian students selected to be mentees for LeadTheFuture, a leading mentorship non-profit organization for students in STEM, with acceptance rate below 20%.
- **Student Ambassador, course representative** and member of the MSc in Data Science committee - active participation in planning courses' structure and mentoring activities for incoming BSc and MSc students.
- **Goalkeeper** at U.S. Darfo Boario (competitive semi-professionistic team, Italian 4th division), Darfo Boario Terme (2007-2015).
- **Volunteering activities** at Gruppo Folk, Niardo (2014-Present): support during festivals, hometown celebrations and other events.
- **Interests:** running, playing basketball and soccer, amateur cooking, playing piano, memes.