

Carlo Abrate

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Experience

ISI Foundation / Junior Researcher

February 2020 - PRESENT, Turin (Italy)

Involved in interdisciplinary research in Data Science and Artificial Intelligence in both theory and applications for the **AI Lab for Finance & Business**, in particular:

- **Data-Driven Forecasting of Energy Volumes** in Italian Ancillary Services Market.
- **Asset Allocation**, give a temporal representation of both assets and liabilities of life and non-life insurance business with a **reinforcement learning** approach

-- / Startup Advisor

August 2019 - PRESENT, (Italy)

Advisor of multiple startups projects in Italy, in particular:

- **Partner and Machine Learning Engineer** advisor for [Sounzone](#), a music marketplace for video synchronizations (2019-Present).
- **Technical and strategic advisor** for *Condomjni*, a disruptive model for the digitalization of building management (2020-Present).

Management Solutions / Data Science Consultant

September 2018 - January 2020, (Italy-Spain)

Involvement in projects related to **credit and financial risk modeling, assessment and definition** according to the regulatory requirements under Basel and local normative, in financial institutions employing **Python, R, SAS, SQL, and Hadoop**, as the main programming languages for data analysis and reporting. Main Projects:

- **Financial Risk Analysis**, world-leading bank (**Madrid, Spain**)
- Target Review of Internal Model (**TRIM**) Mission with European Central Bank (**ECB**), top three Italian Bank (**Turin, Italy**).
- Calculation of Loss-Given-Default (**LGD**) parameters (due to the IFRS9 normative), Spanish bank (**Mallorca, Spain**);
- New Definition of Default (**DoD**) and **LGD** Calculation, Italian Bank (**Verona, Italy**).

SEB Skandinaviska Enskilda Banken AB / Graduate Intern

February 2018 - July 2018, Stockholm (Sweden)

Developed machine learning algorithms to automatically analyze opinions of minutes from central banks: **text mining** (NLP), Python (**sentiment analysis/ summarization**). Stimulant environment (**trading floor**), mentorship from quants, traders, researchers

Junior Enterprise Torino Politecnico (J.E.To.P) / Area Leader

October 2015 - September 2017, Turin (Italy)

Fundraising and partnership leader. Create from scratch events like: "**WTT - Wearable Tech Torino**", the first fair in Italy entirely dedicated to Wearable Technologies; "**Thinkup for Disability**", hackathon based on the cooperation between disabled people and students.

Education

Sapienza University / Phd Student

October 2020 - Present (remotely)

Topics: Explainable ML and Interpretable AI

Politecnico di Torino / Mathematical Engineering

September 2016 - July 2018, (Italy, The Netherlands, Sweden)

Specialization in **Mathematics, Statistics and Optimization on data and networks.**

- **ERASMUS: TU/e Eindhoven University of Technology** – Department Mathematical Engineering and Computer Science – (Sep./2017 to Jan./2018, **The Netherlands**).
- **MASTER THESIS:** "[Topic-based summarization to objectively analyze Central Bank statements and market sentiment](#)", at **SEB Bank, Stockholm, Sweden**.
- Score & Honours: 104/110 | One of the two students graduated in time.
- Relevant Courses: Statistical Models, Data Spaces, Optimization Methods, Information Retrieval, Artificial Intelligence.

Politecnico di Torino / Mathematics for engineering

September 2013 - October 2016, Turin (Italy)

Bachelor of Science in **Mathematics**. Score & Honours: 97/110. Relevant Courses: Statistics & Probability, Programming, Graph Theory, Topology & Algebra.

Universidad Pontificia Comillas ICAI-ICADE / Master Degree in Business

Consulting and Big Data

September 2018 - January 2020, Madrid (Spain)

Not completed due to resignation from the company that funded the master's degree.

Languages

- Italian (Mother tongue)
- English (C1)
- Spanish (B1)

Programming Languages

- Python, SAS (Excellent)
- SQL, R (Advanced)
- Matlab, C, Hadoop, Matematica (Intermediate)

Volunteering Experiences

- [Senzatonica](#), member of the steering committee (2019-Present)
- [M.A.D. GROUP](#), Clean Water & Sanitation Africa (Uganda, 2018): developed and presented a prototype of a healthy village. Studied and supported SINA (Social Innovation Academy), a centre for social innovators and entrepreneurs.
- [EARTH CHARTER INITIATIVE](#), Earth Charter Young Leader (Worldwide, 2018): contributing with workshops and articles.
- PRATI-CARE, SPRAR Petrosino (Italia, 2016): Shelter for young immigrants, in which I was an educator for Italian language and culture.
- PRATI-CARE, Centre pour les Talibés Mbour (Senegal, 2015): supported the re-opening of a reception centre in the Mbour area for Talibés (street boys) and local orphanage.