

# GIULIO CAPUTI

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## EDUCATION

### UNIVERSITY OF OXFORD

Oxford, United Kingdom

#### MSc in Statistical Science

Sep 2024 – Sep 2025 (expected)

- **Relevant Coursework:** Statistical Machine Learning, Advanced Statistical Machine Learning, Applied Statistics, Statistical Inference, Statistical Programming, Computational Statistics, Stochastic Models in Mathematical Genetics, Graphical Models, Bayes Methods

### BOCCONI UNIVERSITY

Milan, Italy

#### BSc in Economics, Management and Computer Science

Sep 2021 – Jul 2024

- **Grade:** 110/110 *Cum Laude*
- **Relevant Coursework:** Machine Learning, Computer Programming, Computer Science, Big Data and Databases, Applied Mathematics, Statistics, Advanced Statistics, Game Theory, Microeconomics, Macroeconomics, IT Law, Finance, Econometrics
- **Thesis:** “Bayesian Optimization for Database Management” ([thesis file here](#))

### GEORGIA INSTITUTE OF TECHNOLOGY

Atlanta, Georgia, USA

#### Exchange Semester, Computer Science and Economics

Jan 2024 – May 2024

- **Grade:** 4.0/4.0
- **Relevant Coursework:** Understanding Markets with Data Science, Network Science, Labor Economics

## WORK EXPERIENCE

### AMAZON

Luxembourg, Luxembourg

#### Business Intelligence Engineer (Intern)

Jun 2023 – Nov 2023

- Identified and corrected inefficiencies in warehousing strategies through data mining techniques with Python and SQL
- Developed machine learning models to optimise the performance of database systems, reducing their running time by up to 75%
- Designed data pipelines to automate data collection through various AWS applications (e.g., Redshift, S3, Lambda, QuickSight)

### BOCCONI STUDENTS FOR MACHINE LEARNING (BSML)

Milan, Italy

#### President and Co-Founder

Jun 2023 – Jun 2024

- Organised hackathons and machine learning events (e.g., tech interns experience, discussions about papers)
- Managed 100+ members and led two research groups

### DELOITTE

Milan, Italy

#### Cyber Security Analyst (Intern)

Jan 2023 – Apr 2023

- Worked in the actuarial division, employing software such as Prophet and Archer
- Used statistical techniques to quantify the client’s cybersecurity risks, increasing accuracy in prediction by 26%

## EXTRACURRICULAR ACTIVITIES & ASSOCIATIONS

Nova Talent Member | LeadTheFuture Mentorship Mentee | Bocconi University Student Ambassador | B.Cyber Researcher | Bocconi Students for Digital Transition Head of Marketing | Bocconi Students for Data Science Associate | RedBubble Designer and Store Owner ([my store](#)) | Luiss EnLabs Service Learner | Associazione Italiana Malati di Cancro Associate | Banca d’Italia Service Learner | Model United Nations Delegate

## RESEARCH INTERESTS

**Automated Tuning of Database Management Systems (DBMSs)** Exploring how machine learning and advanced statistical methods can be used to optimise DBMSs performance ([linked to Amazon](#))

**Bayesian Optimisation** Researching ways to optimise complex, expensive-to-evaluate black-box functions ([linked to Amazon and undergraduate thesis](#))

**Network Science** Investigating algorithms for network analysis and modeling ([linked to Bocconi Students for Machine Learning](#))

## SELECTED PROJECTS

**Missing Knowledge Links** My team and I developed an algorithm that, starting from an input Internet page, builds a network of all connected pages, up to a certain depth. The algorithm later identifies pages that, although not connected among them, share many neighbours. The aim was to identify knowledge that may be used in certain fields where it is currently not employed

**Model Predicting House Prices** I trained different ML models using data on houses for sale and points of interest close to them

**Tic-tac-toe with Reinforcement Learning** I trained an AI to play tic-tac-toe using reinforcement learning

## ADDITIONAL INFORMATION

**Skills** Python (e.g., Pandas, Scikit-learn, PyTorch) Options algorithmic trading, Data analysis, Quantitative research, Data science, Mathematics, Backtesting, Trading strategies, Financial modeling, Programming, Monte carlo, Markov chains, Statistical inference, Communication, Problem solving

**Udemy Courses** Optimization problems and algorithms, Python for Finance and Algorithmic Trading, Web Scraping in Python

**Standardized Tests** GRE 331 (168 Quant, 163 Verbal, 4.0 AWA), IELTS 8.0

**Interests** Philosophy, Weightlifting, Running, Scuba Diving, Calisthenics

I authorise the processing of my personal data present in this curriculum vitae pursuant to Legislative Decree 30 June 2003, n. 196 and to the GDPR (EU Regulation 2016/679)