#### GIULIO CAPUTI

## <u>LinkedIn</u> | <u>GitHub</u> | <u>Personal Website</u> | <u>giulio.caputi@st-hughs.ox.ac.uk</u>

## **EDUCATION**

## UNIVERSITY OF OXFORD

Master of Science in Statistical Science

Oxford, United Kingdom

Sep 2024 – Sep 2025 (expected)

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

### **BOCCONI UNIVERSITY**

Milan, Italy

Bachelor of Science in Economics, Management and Computer Science

Sep 2021 – Jul 2024

• Grade: 110/110 Cum Laude

- <u>Relevant Coursework</u>: Machine Learning, Computer Programming, Computer Science, Big Data and Databases, Calculus, Probability, Statistics, Linear Algebra, Microeconomics, Macroeconomics, IT Law, Accounting, Game Theory, Econometrics
- Thesis: "Bayesian Optimization for Database Management" (thesis file here)

## GEORGIA INSTITUTE OF TECHNOLOGY

Exchange Semester, Computer Science and Economics

Atlanta, Georgia, USA

Jan 2024 – May 2024

• Grade: 4.0/4.0

Relevant Coursework: Understanding Markets with Data Science, Network Science, Labor Economics

#### **EXPERIENCE**

**AMAZON** 

Luxembourg, Luxembourg

Business Intelligence Engineer Intern (Python, SQL, AWS (Redshift, S3, Lambda, QuickSight))

Jun 2023 - Nov 2023

- Identified and corrected inefficiencies in warehousing strategies through data mining techniques
- Developed machine learning models to optimise the performance of several Database Management Systems (DBMSs), reducing their running time by up to 75%, and helping to achieve an estimated reduction in costs of €14 million
- Designed data pipelines that automate the collection of data through various AWS applications

## **BOCCONI STUDENTS FOR MACHINE LEARNING (BSML)**

Milan, Italy

President & Co-Founder (Python, Graph Theory, Events Organization and Management)

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 (BSML website)

**DELOITTE**Milan, Italy

Cyber Security Analyst Intern (Prophet, Archer, R, Git, Python (Scikit-learn, PyTorch, Pandas))

Jan 2023 - Apr 2023

- Worked in the actuarial division
- 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 UN Delegate

## **RESEARCH INTERESTS**

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

**Bayesian Optimisation** Researching ways to optimise complex black-box functions (*linked to Amazon and undergraduate thesis*) **Network Science** Investigating algorithms for network analysis and modelling (*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 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