Valentina Ghidini

PhD Student · Statistics

Bocconi University, Milan

valentina.ghidini95@gmail.com | valentinaghidini.github.io | valentina.ghidini.

Research Interests

Complex networks, Bayesian nonparametrics, statistical learning, eXplainable AI, interpretable machine learning, clustering, latent variable modelling.

Education

Bocconi University *Milan, Italy*

PhD - Statistics *2019 - present*

- Advisors: O. Papaspiliopoulos, D. Durante

University of Turin *Turin, Italy*

MSc, Stochastics and Data Science *2017 - 2019*

- Thesis: Quantitative and Ontology-Based eXplainable Artificial Intelligence techniques for Computer Vision
- Grade: 110/110 summa cum laude, with special mention for the academic curriculum

University of Milano-Bicocca *Milan, Italy*

BSc, Statistics and Information Management *2014 - 2017*

- Thesis: Analysis of the scientific network in PubMed using Graph Databases
- Grade: 110/110 summa cum laude

Research Experience

ISI Foundation *Turin, Italy*

Research Internship - Deep Learning & XAI *Feb 2019 - Sep 2019*

- Application of eXplainable Artificial Intelligence to Computer Vision and Convolutional Neural Networks

CRISP *Milan, Italy*

Research Internship - Data Science *Sep 2016 - Mar 2017*

- Implementation of a Graph Database, exploiting NLP techniques, data & graph analysis

Publications

Published

Ghidini, V., Perotti A., Schifanella R.. 2019. Quantitative and Ontology-Based Comparison of Explanations for Image Classification. Machine Learning, Optimization, and Data Science. LOD 2019. Lecture Notes in Computer Science, vol 11943. Springer

Under Review

Post-hoc Explanations through Probabilistic Sensitivity Measures, joint work with E. Borgonovo et al. (2021+)

In Prep

Bayesian clustering of weighted networks with spatial node attributes, joint work with S. Legramanti, R. Argiento.

Bayesian nonparametric clustering of multiplex networks, joint work with D. Durante, O. Papaspiliopoulos.

Linear models with assumptions-free residuals: a Bayesian nonparametric approach, joint work with F. Ascolani.

Presentations

Conferences

2022 EAC ISBA
July 8 - July 9, 2022
Title (poster): *Life is not symmetric: assumptions-free residuals with a BNP approach*
joint work with F. Ascolani
Taiwan (online)

2022 ISBA World Meeting
June 26 - July 2, 2022
Title (poster): *Life is not symmetric: assumptions-free residuals with a BNP approach*
joint work with F. Ascolani
Montreal, Canada

2021 INFORMS Annual Meeting
October 24-27, 2021
Title: *Post-hoc Explanations through Probabilistic Sensitivity Measures*
joint work with E. Borgonovo et al.
Anaheim, California (online)

LOD 2019 - The Fifth International Conference on Machine Learning, Optimization, and Data Science
September 10-13, 2019
Title: *Quantitative and Ontology-Based Comparison of Explanations for Image Classification*
joint work with A. Perotti et al.
Pavia, Italy

Other

CEST-UCL seminar series on *Responsible Modelling in Uncertain Times*
November 2021
Title: *What assumptions do we make when using black box predictive models?*
Panel discussion with C. Rudin, P. Beneventano.

Awards

Travel grant (on competitive basis) for 2022 World Meeting of the International Society for Bayesian Analysis, Montreal, Canada.
International Society for Bayesian Analysis, July 2022

PhD scolarship, four years.
Bocconi University, 2019

Teaching Experience

Spring 2022 - current	**Advanced Python (Data Science module) - course 30590**, Adjunct Lecturer	*Bocconi University*
Fall 2021	**Mathematics - course 30400**, Teaching Assistant	*Bocconi University*
Spring 2021 - current	**Statistics**, Teaching Assistant	*University of Bergamo*
Fall 2020 - current	**Statistics - course 30001**, Teaching Assistant	*Bocconi University*

Editorial Work

Reviewer for the *European Journal of Operation Research*.

Certifications

Natural Language Processing with Classification and Vector Spaces (2021)
Institute: Coursera
Certificate number: GAJZ9GRHKN8D

PhD Beat - Bocconi Excellence in Advanced Teaching (2021)
Institute: Bocconi University

Deep Learning Specialization (2019)
Courses: Neural Networks and Deep Learning, Hyperparameters tuning, Sequence models, Convolutional Neural Networks.
Institute: Coursera
Certificate number: 9C4VZEV8YTW7

SAS Certified Base Programmer for SAS 9 (2017)
Institute: SAS Institute
Certificate number: BP069923v9

SAS Predictive Modeler Using SAS Miner 13 (2017)
Institute: SAS Institute
Certificate number: PMEM001296v13

First Certificate in English (FCE) (2013)
Institute: Cambridge Institute

Others

Programming Languages

R, python, SAS: excellent

SQL, cypher: intermediate

C, C++, MATLAB: basics

Languages

Italian: native

English: fluent

Professional Memberships

SIS - Societá Italiana di Statistica
IMS - Institute of Mathematical Statistics
ISBA - International Society for Bayesian Analysis