

# PAOLO DALENA

PhD Student in Applied Data Science & Artificial Intelligence @UniTS  
Health Researcher @IRCCS Burlo Garofolo

@ [paolodalena97@gmail.com](mailto:paolodalena97@gmail.com) in <https://www.linkedin.com/in/paolo-dalena/>  
🔗 <https://github.com/PaoloDalena> 🌐 <https://paolodalena.netlify.app/>



## RESEARCH EXPERIENCE

### PhD Student in Applied Data Science and Artificial Intelligence

University of Trieste

📅 Nov 2023 – Present 📍 Trieste, Italy

- Project title: *Development of a prioritization algorithm of pathogenic variants based on public databases of different origins;*
- Supervisors: Giulia Barbati, Pio A. D'Adamo, Massimo Zeviani

### Health Researcher - Data Scientist

IRCCS Burlo Garofolo

📅 Jan 2022 – Present 📍 Trieste, Italy

- *Pediatric clinic & genomics* (from Nov 2023);
  - Participation in national and international projects as a bio-statistician & data scientist;
  - Training of residents for epidemiology and data analysis;
  - Research topics: health data analytics, genomics;
  - Supervisor: Egidio Barbi
- 
- *WHO Collaborating Center for maternal and child health;*
  - Research topics: maternal and child health, health system research, implementation of WHO recommendations;
  - Supervisor: Marzia Lazzerini

### Internship Master thesis

Institute for Mathematical Biology - Hochschule Mannheim

📅 Apr 2021 – Sep 2021 📍 Mannheim, Germany

- Collaboration for Master thesis - Erasmus+ program;
- Supervisors: Simone Giannerini, Lutz Strüngmann

### Internship Master student

Bundesbank Research Centre

📅 Feb 2021 – Apr 2021 📍 Frankfurt am Main, Germany

- Undisclosed project on quality assessment of research center's publications;
- Applied techniques: Big Data Analytics, Text Mining

### Internship Bachelor student

Unit of Biostatistics, Epidemiology and Public Health – University of Padua

📅 Jan 2019 – Mar 2019 📍 Padua, Italy

- Text mining on complex text sources: tumor marker guidelines, development of an R package to import text from PDF files;
- Acquired skills: data science with R, understanding of R language, R programming, R package developing;
- Supervisors: Dario Gregori, Corrado Lanera

## EDUCATION

### Second-level Short Specialisation Degree in Machine learning and big data in precision medicine and biomedical research

University of Padua, Italy

📅 Dic 2022 – Oct 2023

- Thesis title: Prioritization of differential methylation regions for the prediction of celiac disease

### Master degree in Statistics

Alma Mater Studiorum - University of Bologna, Italy

📅 Sep 2019 – Oct 2021

- Curriculum Data Science (taught in English)
- Grade 110/110 L - Weighted avg 28,78/30
- Thesis title: **Circular codes, reading frames and error correction in translation**
- Supervisors: Simone Giannerini, Lutz Strüngmann

### Bachelor degree in Statistics

Alma Mater Studiorum - University of Bologna, Italy

📅 Sep 2016 – Jul 2019

- Curriculum Economics & business
- Grade 110/110 L - Weighted avg 29,15/30
- Thesis title: **Text Mining On Complex Text Sources: Analysis Of The Final Considerations Of The Governor On The Annual Reports Of The Bank Of Italy From 2008 To 2017**
- Supervisors: Ignazio Drudi, Fabrizio Alboni, Corrado Lanera

## PROGRAMMING SKILLS

- R-programming:
  - Data Science
  - Machine Learning
  - Reproducible research - R Markdown, bookdown, pkgdown, blogdown
  - Packages developing
  - Data visualisation - ggplot2, plotly
- Version control - Git, Github, GitLab
- HTML, CSS, Javascript (basic level)
- SPSS, Stata, SAS (basic level)

## TEACHING EXPERIENCE

---

- Training of residents for epidemiology and data analysis (IRCCS Burlo Garofolo, from Nov 2023)
- Co-teaching for the course "Statistical Learning in Epidemiology" (University of Trieste, 2023/24 and 2024/25)
- Teaching for the course "Mathematics and general statistics" (LifeTech ITS Academy, Trieste, 2025)

## CONFERENCE PROCEEDINGS

---

- 62nd Annual Meeting of the European Society for Paediatric Endocrinology (ESPE) 2024  
*Decreased serum DHEAS to cortisol ratio in adolescents evaluated for gender dysphoria*  
G. Tornese, G. Bresciani, A. Roia, et al.  
doi: 10.1159/000541189  
[Hormone Research in Paediatrics \(2024\) - open access](#)
- 50th Annual Conference International Society for Pediatric and Adolescent Diabetes (ISPAD) 2024  
*Carbohydrates intake in children and adolescents with type 1 diabetes mellitus and its relation with physical activity*  
C. Carletti, V. Manfredini, G. Tamaro, et al.  
doi: 10.1159/000541195  
[Hormone Research in Paediatrics \(2024\) - open access](#)
- 13th International Conference on Complex Networks and their Applications (CNA) 2024  
*RedKinNet: Node Centrality-Driven Kinship Matrix Reduction*  
P. Dalena, S. Geremia, G. Barbati, P. A. D'Adamo  
[CNA 2024 Book of Abstracts - open access](#)
- European Society of Cardiology - Preventive Cardiology 2025  
*Polygenic risk scores in dilated cardiomyopathy: associations with arrhythmic events and implications for clinical research*  
I. Gandin, M. Rossi, P. Dalena, et al.  
doi: 10.1093/eurjpc/zwaf236.021  
[European Journal of Preventive Cardiology \(2025\) open access](#)
- 15-th Scientific Meeting Classification and Data Analysis Group - CLADAG 2025  
*Prioritization of differential methylation regions for the prediction of coeliac disease: a Machine Learning approach*  
P. Dalena, L. De Leo, E. Spinelli, G. Barbati, A. P. D'Adamo  
[CLADAG 2025 Book of Abstracts - open access](#)

## PROFESSIONAL ACHIEVEMENTS

---

- R package [tastypie](#) available on CRAN - 10/02/2021
- PeerJ Enhanced Lifetime Individual Membership, Leanpub Lifetime Reader Membership (hackathon prizes)
- Reviewer for [Frontiers in Endocrinology](#) - Dec 2023
- Reviewer for [The R Journal](#) - Apr 2025

## HOBBIES & INTERESTS

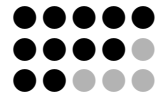
---

My hobbies are playing football and climbing.

## LANGUAGES

---

Italian  
English  
French



## CONFERENCES

---

- 30th International Pediatric Association (IPA) Congress & 60th Annual Conference of the Indian Academy of Pediatrics (IAP) 2023  
- 1 oral & 3 poster presentations  
18/02/2023 - 22/02/2023  
Gandhinagar, India
- European Scientific Conference on Applied Infectious Disease Epidemiology (ESCAIDE) 22/10/2023 - 24/10/2023  
Barcelona, Spain
- 45th Annual Conference of the International Society for Clinical Biostatistics (ISCB) 2024  
- 2 poster presentations  
21/07/2024 - 25/07/2024  
Thessaloniki, Greece
- 13th International Conference on Complex Networks and their Applications (CNA) 2024  
- 1 oral presentation  
10/12/2024 - 12/12/2024  
Istanbul, Turkey
- 1st Workshop on Data Science for Health and Biology 2025  
- 1 poster presentation  
07/04/2025 - 09/04/2025  
Milan, Italy
- Italian Statistical Society (SIS) Conference 2025  
16/06/2025 - 18/06/2025  
Genova, Italy
- 15-th Scientific Meeting Classification and Data Analysis Group - CLADAG 2025  
- 1 oral presentation  
08/09/2025 - 10/09/2025  
Naples, Italy

## SCHOOLS

---

- Monitoring Outbreaks for Disease surveillance in a data science context (MOOD) Summer School 2023  
- awarded of merit-based scholarship  
- 1st classified hackathon *Predicting the occurrence of ticks in the UK between 2014-2021*  
21/05/2023 - 27/05/2023  
Split, Croatia
- Utrecht Summer School 2024 - Advanced Multilevel Analysis  
15/07/2024 - 17/07/2024  
Utrecht, The Netherlands
- CINECA - High Performance Bioinformatics  
04/12/2024 - 06/12/2024  
Rome, Italy

# PUBLICATIONS

- *Women's suggestions on how to improve the quality of maternal and newborn care during the COVID-19 pandemic in Italy: A co-occurrence network analysis*  
S. Geremia\*, E. Pessa Valente, I. Mariani, P. Dalena, M. Lazzerini  
doi: 10.7189/jogh.13.06013 - [Journal of Global Health \(2023\) - open access](#)
- *Evaluation of the WHO standards to assess quality of care for children with acute respiratory infections: findings of a baseline multicentre assessment (CHOICE) in Italy*  
M. Lazzerini, M. Dagnelut, P. Dalena\*, et al.  
doi: 10.1136/bmjpo-2024-002552 - [BMJ Paediatrics Open \(2024\) - open access](#)
- *Implementation of the WHO standards to assess the quality of care for children with acute diarrhoea: findings of a multicentre study (CHOICE) in Italy*  
M. Lazzerini, I. Sforzi, I. Liguoro, et al. (P. Dalena\* last author)  
doi: 10.1136/bmjpo-2024-002569 - [BMJ Paediatrics Open \(2024\) - open access](#)
- *Implementation of the WHO standards to assess quality of care for children with acute pain in EDs: findings of a multicentre study (CHOICE) in Italy*  
E. Balestra, G. Cozzi, I. Sforzi, et al.  
doi: 10.1136/bmjpo-2024-002610 - [BMJ Paediatrics Open \(2024\) - open access](#)
- *Implementation of the WHO Standards to assess quality of paediatric care at the facility level using service users' perspective as source of data: a multicentre quality improvement study in Italy*  
S. Bressan, G. Sartor, P. Dalena\*, et al.  
doi: 10.1136/bmjpo-2024-002600 - [BMJ Paediatrics Open \(2024\) - open access](#)
- *Parental stress, depression, anxiety and participation in care in Neonatal Intensive Care Unit: a cross-sectional study in Italy comparing mothers versus fathers*  
J. Bua, P. Dalena\*, I. Mariani, et al.  
doi: 10.1136/bmjpo-2023-002429 - [BMJ Paediatrics Open \(2024\) - open access](#)
- *Parental stress, depression, anxiety and participation to care in neonatal intensive care units: results of a prospective study in Italy, Brazil and Tanzania*  
M. Lazzerini, D. Barcala Gomez, G. Azzimonti, et al.  
doi: 10.1136/bmjpo-2024-002539 - [BMJ Paediatrics Open \(2024\) - open access](#)
- *Lesson in understanding parents' perspective: perception of quality of care and COVID-19-related fears among users of paediatric health services over the COVID-19 pandemic in 11 facilities in Italy*  
P. Dalena, A. Zago\*, A. Troisi, et al.  
doi: 10.1136/bmjpo-2024-002926 - [BMJ Paediatrics Open \(2024\) - open access](#)
- *Risk of malignant transformation and infections in congenital lung malformations in adults: a systematic review*  
F. Pederiva, P. Dalena, N. Pasqua, I. Bresesti, V. Testa, S. Zirpoli, V. Gentilino  
doi: 10.1183/16000617.0254-2024 - [European Respiratory Review \(2025\) - open access](#)
- *Parental Stress, Depression, Anxiety, and Participation in Neonatal Care in a Referral Brazilian NICU over Different Phases of the COVID-19 Pandemic*  
D. Barcala Gomez, E. Pessa Valente, P. Dalena, et al.  
doi: 10.3390/children12040496 - [MDPI Children \(2025\) - open access](#)
- *Back to normal? A retrospective study on stimulation test and endocrinological diagnosis before, during and after COVID-19 pandemics*  
M. Peinkhofer, S. Passarella, P. Dalena, et al.  
doi: 10.3389/fendo.2025.1571685 - [Frontiers in Endocrinology \(2025\) - open access](#)
- *Impact of Muscle Paralysis After Primary Esophageal Atresia Repair*  
F. Pederiva, T. Soyer, P. Dalena, et al.  
doi: 10.1016/j.jpedsurg.2025.162361 - [Journal of Pediatric Surgery \(2025\) - open access](#)
- *Headache in the paediatric population: the role of the ophthalmologist*  
M. Degrassi, S. Tonetto, P. Michieletto, P. Dalena, E. Barbi, S. Pensiero  
doi: 10.3389/fped.2025.1547750 - [Frontiers in Pediatrics \(2025\) - open access](#)
- *Dexmedetomidine Versus Midazolam for Propofol Sparing in Procedural Sedation of Children With Leukemia: A Consecutive Case Series*  
D. Squillaci, K. Console, L. Colussi, V. Kiren, M. Rabusin, G. Stocco, A. Longo, P. Dalena, E. Barbi  
doi: 10.1111/aas.70107 - [Acta Anaesthesiologica Scandinavica \(2025\) - open access](#)
- *Reply to: Comment on: Risk of malignant transformation and infections in congenital lung malformations in adults: a systematic review.*  
F. Pederiva, P. Dalena, N. Pasqua, I. Bresesti, V. Testa, S. Zirpoli, V. Gentilino  
doi: 10.1183/16000617.0166-2025 - [European Respiratory Review \(2025\) - open access](#)