

Marta Iovino

PhD Student

Personal details

Date of birth 02/12/1997

Education

12/2022 - 12/2025	PhD in Information and Communication Technologies University of Palermo, Palermo Project Title: <i>Machine Learning applications for biomedical signal analysis</i>
09/2019 - 07/2022	MSc in Biomedical Engineering (LM-21) - Biomedical Instrumentation Polytechnic of Turin, Turin Thesis title: <i>Automated LSTM-based sleep stage classification using polysomnographic signal processing techniques</i>
09/2016 - 10/2019	BSc in Biomedical Engineering (L-9) - Technologies for Diagnostics University of Palermo, Palermo Thesis title: <i>Characterization of complex physiological systems through information theory methods</i>

Research Experiences

09/2023 - 11/2023	Research period abroad, Erasmus project University of Novi Sad, Novi Sad, (RS). Department of Power, Electronic and Communication Engineering, Faculty of Technical Sciences
02/2019 - 06/2019	Research period abroad, Erasmus project IUT, Université Angers, Angers (FR). Department of Informatics and Electronics Engineering

Certifications

Languages	FCE - Level B2 , Cambridge English DELFI - Level B1 , Institut Francais
Coding	Deep Learning , Coursera, 2022 Python Essencial Training , LinkedIn, 2022 Artificial Intelligence Foundation: Machine Learning , LinkedIn, 2022 Exploratory Data Analysis for Machine Learning , Coursera, 2022 Deep Learning in Electronic Health Records , Coursera, 2022 Programming and scientific computing with MATLAB , Scuola di calcolo scientifico con MATLAB, 2019

Professional Experiences

09/2023	Achievement of the qualification to practice the profession of Engineer
09/2022 - 11/2022	Functional Safety Engineer - Automotive Capgemini Engineering, Turin (IT)
03/2022 - 06/2022	Product Control Officer Qwince Innovation s.r.l, Palermo (IT)

Publications

Journal Article

- [1] D. Fruet, C. Barà, R. Pernice, **M. Iovino**, L. Faes, and G. Nollo, "Assessing driving stress through multi-domain physiological data using a signal normalization approach," *submitted to IEEE Access*, 2023.
- [2] **M. Iovino**, I. Lazic, T. Loncar-Turukalo, M. Javorka, R. Pernice, and L. Faes, "A comprehensive comparison of machine learning algorithms applied to heart rate and pulse rate variability indices for single and multi-feature classification of physiological stress," *submitted to Physiological Measurements*, 2023.

Conference Proceedings

- [3] **M. Iovino**, I. Lazic, C. Barà, L. Faes, and R. Pernice, "A conditional mutual information-based feature selection method for gender classification," in *submitted to ESGCO Conference*, 2024.
- [4] I. Lazic, G. Mijatovic, **M. Iovino**, T. Loncar-Turukalo, and L. Faes, "A classification method based on local information and nearest neighbor entropy estimation," in *submitted to 22nd IEEE Mediterranean Electrotechnical Conference*, 2024.
- [5] R. Pernice, L. Sparacino, **M. Iovino**, A. Raimondi, Y. Antonacci, and L. Faes, "Gender-related differences in time and spectral entropy rate measures of cardiovascular variability," in *submitted to ESGCO Conference*, 2024.
- [6] R. Saputo, **M. Iovino**, R. Pernice, M. Javorka, and L. Faes, "Multi-feature classification of physiological stress in cardiovascular and cardiorespiratory interactions," in *submitted to ESGCO Conference*, 2024.
- [7] **M. Iovino**, M. Javorka, L. Faes, and R. Pernice, "Comparison of machine learning approaches for physiological states classification using heart rate and pulse rate variability indices," in *Proceedings of the Eighth National Congress of Bioengineering*, Pàtron editore, 2023, pp. 679–682.
- [8] **M. Iovino**, I. Lazic, T. Loncar-Turukalo, M. Javorka, R. Pernice, and L. Faes, "Classification of physiological states through machine learning algorithms applied to ultra-short-term heart rate and pulse rate variability indices on a single-feature basis," in *Mediterranean Conference on Medical and Biological Engineering and Computing*, Springer Nature Switzerland Cham, 2023, pp. 114–124.

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