HAMZA AMRANI

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Department of Informatics, Systems and Communication DISCo - University of Milano-Bicocca

EDUCATION

Ph.D., Computer Science, University of Milano-Bicocca   2022 - 2025
   Topics: Deep Learning, Language Models, Representation Learning, Neuroscience, Signal Processing
   Supervisors: Prof. Daniela Micucci, Prof. Paolo Napoletano

Master's degree, Computer Science, University of Milano-Bicocca   2018 - 2021
   Thesis: Model-centric and Data-centric AI for Personalization in Human Activity Recognition.
   Graduated with 110/110 *cum laude*

Bachelor's degree, Computer Science, University of Milano-Bicocca   2015 - 2018
   Thesis: Recognition and Retrieval of logos from digital images.
   Graduated with 104/110

EXPERIENCE

Data Scientist, ContinuumLab.ai   Mar 2022 -
   - Conducting exploratory data analysis to identify trends and patterns,   *San Francisco, CA, United States*
   and designing machine learning algorithms to predict outcomes and optimize business processes;
   - Designing and implementing generative AI applications using pre-trained language;
   models and custom training data.
   - Collaborating with experts from Harvard Business School and Oxford University.

Graduate Researcher, University of Milano-Bicocca   Nov 2019 - Oct 2021
   Project: SideraB by Lombardy Region and European Union for home rehabilitation.   *Milano, Italy*
   - Development of a framework for long term data collection to support Automatic HAR;
   - Personalization of HAR models with incremental learning and deep learning approaches;
   - Unsupervised Learning in HAR with Seq2Seq architecture and Deep Clustering.

High School Teacher, I.T.I.S. P. Paleocapa   Oct 2018 - Jun 2019
   Theory teacher (A041) of 5 classes.   *Bergamo, Italy*
   Subjects: Information technology (1st year), C++ programming (4th year); Systems and networks (4th year)

TEACHING

University of Milano-Bicocca

   2023, Intelligent Consumer Technologies, Master's Degree in Artificial Intelligence for
       Science and Technology, 2nd year

   2021, Mobile Programming, Bachelor's Degree in Computer Science, 3rd year

   2021, Computer Science and Maths Laboratory, Bachelor's Degree in Math, 1st year

PUBLICATIONS

Amrani H., Micucci D., Napoletano P. (2023). Deep Representation Learning for Open Vocabulary
Electroencephalography-to-Text Decoding. *arxiv preprint*.

Amrani H., Micucci D., Napoletano P. (2022). Unsupervised Deep Learning-based clustering for Human
Activity Recognition. *2022 IEEE 12th International Conference on Consumer Electronics (ICCE-Berlin), 1-6*.

Amrani H., Micucci D., Napoletano P. (2021). Personalized Models in Human Activity Recognition using Deep Learning. *2020 25th International Conference on Pattern Recognition (ICPR), 9682-9688.*

Amrani H., Micucci D., Mobilio M., Napoletano P. (2021). Homogenization of Existing Inertial-Based Datasets to Support Human Activity Recognition. *Neural Information Processing Systems Workshop 2021.*

THESIS SUPERVISION

Master's Degree in Computer Science:
Federico De Iaco (2021): *Continuous Learning Platform: generation of classifiers for ADLs*
Ilario Rizzi (2023): *Brain-Computer Interface for Motor Imagery recognition: EEG acquisition and classification for vehicle control*
Nicolae A. Andrei (2023): *A Platform Supporting the Design of Acquisition Protocols of Brain Signals*

Master's Degree in Data Science:
Davide Prando (2023): *Brain-to-text: Comparative Analysis and Feature Extraction Techniques in EEG Datasets for Enhanced Mental State Classification*

VARIOUS

Talks
6th Advanced Course on Data Science & Machine Learning (ACDL) 2023
"Decoding Speech from Non-Invasive Brain Recordings using Large Language Models"

Reviewer
IEEE MetroXRAINE 2023
Journal of Reliable Intelligent Environments
International Journal of Machine Learning and Cybernetics