# Hamza Amrani

Curriculum Vitae



### Education

2018 - 2021 Master's Degree in Computer Science, University of Milano-Bicocca, Milan (Italy).

Graduated with 110/110 cum laude

Thesis: Model-centric and Data-centric AI for Personalization in Human Activity Recognition.

Supervisors: Prof. Paolo Napoletano, Prof. Daniela Micucci

2015 – 2018 Bachelor's Degree in Computer Science, University of Milano-Bicocca, Milan (Italy).

Graduated with 104/110

Thesis: Recognition and Retrieval of logos from digital images.

Supervisors: Prof. Raimondo Schettini, Dr. Marco Buzzelli

2010–2015 **Technical High School**, *I.T.I.S. P. Paleocapa*, Bergamo (*Italy*).

Thesis: An Android application that share contacts information with the NFC technology.

## Research Experience

2019 – 2021 **Fellow in Inertial Sensor-based movement analysis for Human Activity Recognition**, University of Milano-Bicocca, Milan (Italy), **Supervisor**: Prof. Daniela Micucci.

Sidera∧B project by Lombardy Region and European Union (Announcement POR-FESR 2014-2020)

- 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 Clustering approaches based on Deep Learning. *Thesis supervision*: 3 BSc students and 1 MSc student.

# Teaching Experience

University of Milano-Bicocca, Milan (Italy)

- Spring, 2021 Mobile Programming Assistantship, 3rd year, Bachelor's Degree in Computer Science.
- Spring, 2021 Computer Science and Maths Laboratory Assistantship, 1st year, Bachelor's Degree in Mathematics.

I.T.I.S. P. Paleocapa, Bergamo (Italy)

2018 – 2019 *High School Computer Science Teacher*, 5 classes, *Subjects*: C++ programming, systems and networks, information technology.

#### Publications

- 2021 (accepted) Hamza Amrani, Daniela Micucci, Marco Mobilio, and Paolo Napoletano. Homogenization of existing inertial-based datasets to support human activity recognition. In NeurIPS Data-Centric AI Workshop (DCAI 2021), Virtual, 2021.
- 2021 **Hamza Amrani**, Daniela Micucci, and Paolo Napoletano. Personalized models in human activity recognition using deep learning. In *2020 25th International Conference on Pattern Recognition (ICPR)*, pages 9682–9688, 2021.

### Skills

Machine Learning, Deep Learning, Signal Processing, Computer Vision, Unsupervised Learning, Feature Extraction, Representation Learning, Information Retrieval

Programming Python (TensorFlow, Keras, PyTorch), MATLAB, R, C++, Java

Database SQL, MySQL, MongoDB

Web HTML5, PHP, Javascript

Languages Italian (native), English (advanced)