PERSONAL INFORMATION

Mirko Paolo Barbato

Date of birth 30 September 1994 | Nationality Italian

WORK EXPERIENCE AND RESEARCH ACTIVITY

January 2025 – Current

Research grant

University of Milano-Bicocca

Group Intelligent Sensing Lab (ISLab)

project ANTHEM: AdvaNeed Technologies for Human-centrEd Medicine - Artificial Intelligence techniques for the analysis, recognition, and interpretability of health signals

December 2023 – Dicember 2024

Research grant

University of Milano-Bicocca

Group Imaging and Vision Lab (IVL)

project ANTHEM: AdvaNeed Technologies for Human-centrEd Medicine - Artificial Intelligence techniques for the analysis, recognition, and interpretability of health signals

December 2022 – November 2023

Research scholarship

University of Milano-Bicocca

Group Imaging and Vision Lab (IVL)

project Implementation of a software library for analysis and visualization of multisource signals (typically RGB cameras, multispectral and other)

October 2020 – November 2022

Research scholarship

National Institute for Nuclear Physics (INFN)

project PIGNOLETTO - Soil segmentation and classification with automatic learning techniques using multi-source data

September 2019 – January 2020

Stage

Company NEC Corporation, Tokyo, Japan

Stagist for five months for the Biometrics Research Laboratories

TEACHING ACTIVITY

March 2025 – June 2025

Professor on contract

University of Milano-Bicocca

Degree Master

Course Artificial Intelligence for Science and Technology - Advanced Computational Techniques for Big Imaging and Signal Data

March 2024 – June 2024	**Professor on contract**
	University of Milano-Bicocca
Degree	Master
Course	Artificial Intelligence for Science and Technology - Advanced Computational Techniques for Big Imaging and Signal Data

October 2024 – September 2025	**Tutoring**
	University of Milano-Bicocca
Degree	Master
Course	Artificial Intelligence for Science and Technology - Advanced Computational Techniques for Big Imaging and Signal Data

October 2023 – September 2024	**Tutoring**
	University of Milano-Bicocca
Degree	Master
Course	Artificial Intelligence for Science and Technology - Advanced Computational Techniques for Big Imaging and Signal Data

June 2023 – September 2023	**Tutoring**
	University of Milano-Bicocca
Degree	Master
Course	Artificial Intelligence for Science and Technology - Advanced Computational Techniques for Big Imaging and Signal Data

October 2020 – September 2021	**Tutoring**
	University of Milano-Bicocca
Degree	Bachelor
Course	Computer Science - Programming 1

EDUCATION AND TRAINING

October 2020 – February 2024	**Ph.D. in Computer Science**
	University of Milano-Bicocca
Group	Imaging and Vision Lab (IVL)
Supervisor	Prof. Paolo Napoletano
Co-Supervisor	Dr. Flavio Piccoli

September 2022 – March 2023	**Ph.D. in Computer Science - Period abroad**
	Technische Universität Berlin
Group	Remote Sensing Image Analysis (RSiM)
Supervisor	Prof. Begüm Demir

October 2017 – April 2020	**Master Degree in Computer Science**
	University of Milano-Bicocca
Graduation grade	110/110 with honors
Graduate thesis	Color Filter Optimization Using Face Recognition Model and Hyperspectral Images
Core studies	Machine Learning, Deep Learning, Visual Information Processing and Management, Computer graphics 2D/3D, Theory of computation

September 2014 – October 2017	**Bachelor Degree in Computer Science**
	University of Milano-Bicocca
Graduation grade	110/110 with honors
Graduate thesis	Analysis of the Android-Unity interaction through the realization of ludic application
Core studies	Java, Matlab, Image processing, Algorithms and statistics

2008 – 2013	**Secondary School Diploma**
	Scientific Lyceum Donato Bramante, Magenta Italy

PERSONAL SKILLS

Mother tongue   Italian

Other languages

UNDERSTANDING		SPEAKING		WRITING
Listening	Reading	Spoken interaction	Spoken production	
English				
C2	C2	C1	C1	C1
French				
A2	A2	A2	A2	A2

Levels: A1 and A2: Basic user – B1 and B2: Independent user – C1 and C2: Proficient user
Common European Framework of Reference for Languages

Other languages
– Japanese:
  • Vocabulary: N5 A
  • Grammar: N5 A
  • Reading: N5 A
  • Listening: N5

Test levels: from N5 (Basic) to N1 (Proficient)
Reference Information: A: the number of correct responses is 67% or higher; B: the number of correct responses is between 34% and 66%; C: the number of correct responses is less than 34%

Results reference: JLPT results description

Japanese-Language Proficiency Test (JLPT) N5

Computer skills
– Programming languages: Java, Matlab, Python, C, C++
– Other: QGIS, HTML, CSS, SQL, most Microsoft Office programs

Other experiences
– I have worked in team and have taken part in projects like hackathon
– I have participated in an English Club

Driving licence   B

PUBBLICATIONS

Mirko Paolo Barbato, Giorgia Rigamonti Davide Marelli, and Paolo Napoletano. (2025). Lightweight Sequential Transformers for Blood Glucose Level Prediction in Type-1 Diabetes. IEEE Journal of Biomedical and Health Informatics. PP. 1-11. 10.1109/JBHI.2025.3633194.

Giorgia Rigamonti, Mirko Paolo Barbato, Davide Marelli, and Paolo Napoletano. Improving Detection of Type-1 Diabetes Adverse Events Using GRU Networks. 2024 IEEE 8th Forum on Research and Technologies for Society and Industry Innovation (RTSI). IEEE, 2024

Flavio Piccoli, Mirko Paolo Barbato, Marco Peracchi, and Paolo Napoletano. Estimation of soil characteristics from multispectral sentinel-3 imagery and dem derivatives using machine learning. Sensors, 23(18):7876, 2023.

Mirko Paolo Barbato, Flavio Piccoli, Paolo Napoletano. Ticino: A multi-modal remote sensing dataset for semantic segmentation. Expert Systems with Applications, 249: 123600, 2024.

Simone Zini, Mirko Paolo Barbato, Flavio Piccoli, and Paolo Napoletano. Deep learning hyperspectral pansharpening on large scale prisma dataset. Remote Sensing. 16:12:2079, 2024

Mirko Paolo Barbato, Flavio Piccoli, and Paolo Napoletano. Multimodal earth observation modeling using ai. In International Conference on Modelling and Simulation for Autonomous Systems. Springer, 2023.

Veronica Grazia Morelli, Mirko Paolo Barbato, Flavio Piccoli, and Paolo Napoletano. Multimodal fusion methods with vision transformers for remote sensing semantic segmentation. In 2023 13th Workshop on Hyperspectral Imaging and Signal Processing: Evolution in Remote Sensing (WHISPERS). IEEE, 2023

Mirko Paolo Barbato, Paolo Napoletano, Flavio Piccoli, and Raimondo Schettini. Unsupervised segmentation of hyperspectral remote sensing images with superpixels. Remote Sensing Applications: Society and Environment, 28:100823, 2022.

CONFERENCE SPEAKER

10/31/2023 - 11/02/2023	13th Workshop WHISPERS - Hyperspectral Imaging and Signal Processing: Evolution in Remote Sensing
Location	The Eugenides Foundation's technologically advanced Conference Centre, Athens, Greece
Presentation	Veronica Grazia Morelli, Mirko Paolo Barbato, Flavio Piccoli, and Paolo Napoletano. Multimodal Fusion Methods with Vision Transformers for Remote Sensing Semantic Segmentation.
10/17/2023 - 10/10/2023	MESAS'23 - Modelling and Simulation for Autonomous Systems by NATO Modelling & Simulation Centre of Excellence
Location	University of Palermo, Palermo, Italy
Presentation	Mirko Paolo Barbato, Flavio Piccoli, and Paolo Napoletano. Multimodal Earth Observation Modeling using AI.