

# Marco Parola

## Ph.D. candidate

MLPI member



Last update: November 23, 2023

Up-to-date version of CV is available at  
<https://MarcoParola.github.io/cv>

Linkedin	
Telegram	
GitHub	
Stack Overflow	
ORCID	
ResearchGate	
Email	

Ph.D. student enrolled in the Information Engineering course at the University of Pisa (Italy). Specialised in advanced deep learning architectures, computer vision and explainable artificial intelligence. I am enthusiastic about open source and open data principles, actively participate in the Stack Overflow community and contribute to GitHub projects. Full stack development skills on main deployment platforms developed during experiences in the enterprise environment.

## Education

01/11/2022 - present

### Ph.D.

Ph.D. in Information Engineering enrolled in the XXXVIII cycle of the PhD in Information Engineering at University of Pisa. (in progress)

15/10/2019 - 18/02/2022

### Master degree

Master degree in Artificial Intelligence and Data Engineering at University of Pisa. Mark: 110/110

08/11/2015 - 14/10/2019

### Bachelor degree

Bachelor degree in Computer Engineering at University of Pisa. Mark: 97/110

Python	●●●●●	DL	●●●●●	OpenCV	●●●●●	XAI	●●●●●	ML	●●●●●	JS	●●●●●
C/C++	●●●●●	C#	●●●●●	Java	●●●●●	Data	●●●●●	Linux	●●●●●	Git	●●●●●
Backend	●●●●●	Frontend	●●●●●	Web	●●●●●						

## Professional Experience

01/11/2022 - present

### Ph.D. candidate

Ph.D. candidate enrolled in Information Engineering phd program at [University of Pisa](#).

- Deep Learning
- XAI
- Medical Imaging
- Computer Vision

01/05/2022 - 31/10/2022

## Research fellow

Research fellow on "Decision support systems with explainable models for diagnosis and prognosis based on medical images" funded by MUR-PRIN REASONIG 2020 project, supervisors Prof. Gigliola Vaglini and Prof. Mario GCA Cimino; at [University of Pisa](#).

Deep Learning XAI Medical Imaging Computer Vision

15/10/2021 - 30/04/2022

## Machine learning engineer

Machine learning engineer at [Move Solutions](#) - Move S.r.l., Lucca. Part time. I developed microservices to be integrated into the Move Solutions platform architecture to provide ML analysis on sensor signals.

Python Flask MongoDB Signal processing Sensors IoT microservices Docker

01/09/2019 - 15/06/2021

## Software developer

Software developer at [5Space](#) S.n.c., Livorno. I worked part-time on OptGear project, a web application to perform optimization calculations for mechanical gears, which finds the best combination of gear parameters.

.NET ASP.NET MSSQL C# web microservices

30/07/2018 - 31/01/2019

## Software developer intern

Software developer at [Labotori Archa](#) S.r.l., Pisa. Internship. Implementation of LIMS (Laboratory Information Management System) using Microsoft technology stack.

.NET ASP.NET MSSQL C# web

## Publications

C

2023

**Parola, M.**, La Mantia, G., Galatolo, F., Cimino, M.G., Campisi, G., Di Fede, O., 2023. **Image-based screening of oral cancer via deep ensemble architecture**, in: 2023 IEEE Symposium Series on Computational Intelligence (SSCI), IEEE. pp. 1570–1576. doi:10.13140/RG.2.2.24070.34880

 [source code](#)

Object Detection Medical Imaging Deep Learning Ensemble Learning Oral Cancer

C

2023

Simionato, G.; **Parola, M.**; and Cimino, M.; (2023). **Impressionist Hole Detection and Healing Using Swarms of Agents with Quantized Perception**. In Proceedings of 2023 IEEE Symposium Series on Computational Intelligence. (2023).

 [source code](#)

Drone Swarm Intelligence Hole Detection

C

2023

**Parola, M.**; Dirrhami, H.; Cimino, M. and Squeglia, N. (2023). **Effects of Environmental Conditions on Historic Buildings: Interpretable Versus Accurate Exploratory Data Analysis**. In Proceedings of the 12th International Conference on Data Science, Technology and Applications - DATA; ISBN 978-989-758-664-4; ISSN 2184-285X, SciTePress, pages 429-435. DOI: 10.5220/0012119700003541

 [source code](#)

Regression   Stuctural Health Monitoring   Deep Leraning   Sensors   Tower of Pisa

O

2022

**Parola, M.**; Galatolo, F.; Torzoni, M. and Cimino, M. (2022). **Convolutional Neural Networks for Structural Damage Localization on Digital Twins**. In International Conference on Deep Learning Theory and Applications (pp. 78-97). Cham: Springer Nature Switzerland.

 [source code](#)  [data](#)

Stuctural Health Monitoring   Deep Leraning   Sensors   Digital Twin

C

2022

Cimino, M.; Galatolo, F.; **Parola, M.**; Perilli, N. and Squeglia, N. (2022). **Deep Learning of Structural Changes in Historical Buildings: The Case Study of the Pisa Tower**. In Proceedings of the 14th International Joint Conference on Computational Intelligence (IJCCI 2022) - NCTA; ISBN 978-989-758-611-8; ISSN 2184-3236, SciTePress, pages 396-403. DOI: 10.5220/0011551800003332

 [source code](#)

Stuctural Health Monitoring   Deep Leraning   Sensors   Tower of Pisa

C

2022

**Parola, M.**; Galatolo, F.; Torzoni, M.; Cimino, M. and Vaglini, G. (2022). **Structural Damage Localization via Deep Learning and IoT Enabled Digital Twin**. In Proceedings of the 3rd International Conference on Deep Learning Theory and Applications - DeLTA; ISBN 978-989-758-584-5; ISSN 2184-9277, SciTePress, pages 199-206. DOI: 10.5220/0011320600003277

 [source code](#)  [data](#)

Stuctural Health Monitoring   Deep Leraning   Sensors   Digital Twin

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2021

**Parola, M.**, Nannini, A., & Poleggi, S. (2021). **Web image search engine based on LSH index and CNN Resnet50**. arXiv preprint arXiv:2108.13301.

Information Retrieval   Computer Vision   Deep Leraning