




Lorenzo Stacchio


Date of birth: 09/11/1996


Nationality: Italian

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EDUCATION AND TRAINING

01/11/2020 – CURRENT Bologna

● **Ph.d. in Computer Science (INF/O1)** Alma Mater Studiorum - Un

Website <https://www.unibo.it/sitoweb/lorenzo.stacchio2/>

Link <https://www.unibo.it/sitoweb/lorenzo.stacchio2/>

19/09/2018 – 13/10/2020 Bologna, Italy

● **Master Degree in Computer Science** Alma Mater Studiorum - U

Website <https://www.unibo.it/en> | Final grade 110/110 cum Laude | Level in EQF EQ

04/10/2015 – 24/07/2018 Camerino, Italy

● **Bachelor Degree in Computer Science** University of Camerino

Website <https://www.unicam.it/en/home> | Final grade 110/110 cum Laude | Level in

14/09/2010 – 28/06/2015 Macerata, Italy

● **High school leaving in "Company Information systems"** Alberi

Website <https://www.itemacerata.edu.it/> | Final grade 100/100 | Level in EQF EQF le

LANGUAGE SKILLS

MOTHER TONGUE(S): Italian

Other language(s):

English

Listening C1

Reading C1

Writing C1

Spoken production C1

Spoken interaction C1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

ADDITIONAL INFORMATION

Publications

● **[Making Paper Labels Smart for Augmented Wine Recognition](#)** 2023

Angeli, A., Stacchio, L., Donatiello, L., Giacchè, A. & Gustavo, M. (2023). Making Augmented Wine Recognition. The Visual Computer, to appear.

● **[Would you rather come to a tango concert in theater or in VR? Aesthetic Musical experiences, either live, 2D or 3D](#)**

2023

Scorolli, C., Grasso, E. N., Stacchio, L., Armandi, V., Matteucci, G., & Marfia, G. (2023). Would you rather come to a tango concert in theater or in VR? Aesthetic emotions & social presence in music. 3D. *Computers in Human Behavior*, 107910.

● **[Analyzing Cultural Relationships Visual Cues through Deep Learning Models](#)**

2023

Stacchio, L., Angeli, A., Lisanti, G., & Marfia, G. (2023). Analyzing cultural relationships through deep learning models in a cross-dataset setting. *Neural Computing and Applications*, to appear.

HOCTOPUS: An Open-Source Cross-Reality tool to Augment Live-Streaming Remote Classes 2023

Asunis L., Cirina A., Stacchio L., Marfia G. HOCTOPUS: An Open-Source Cross-Reality tool to Augment Live-Streaming Remote Classes. In Proceedings of the 2023 IEEE International Symposium on Mixed and Augmented Reality Adjunct (ISMAR-Adjunct). IEEE. (to appear)

Unity-VRlines: Towards a Modular eXtended Reality Unity Flight Simulator 2023

Di Maria, G., Stacchio, L. & Marfia, G. (2023). Unity-VRlines: Towards a Modular eXtended Reality Unity Flight Simulator. In International Conference on Entertainment Computing-IFIP ICEC 2023: 22nd IFIP International Conference on Entertainment Computing, IFIP-ICEC 2023, Bologna, Italy, November 15-17, 2023. Springer International Publishing. (to appear)

AnnHoloTator: A Mixed Reality Collaborative Platform for Manufacturing Work Instruction Interaction

2023

Stacchio, L., Armandi, V., Donatiello, L., & Marfia, G. (2023, March). AnnHoloTator: A Mixed Reality Collaborative Platform for Manufacturing Work Instruction Interaction. In 2023 IEEE Conference on Virtual Reality and 3D User Interfaces Abstracts and Workshops (VRW) (pp. 418-424). IEEE.

Empowering Digital Twins with Extended Reality Collaborations 2022

Stacchio, L., Angeli, A., & Marfia, G. (2022). Empowering digital twins with eXtended reality collaborations. *Virtual Reality & Intelligent Hardware*, 4(6), 487-505.

Towards a holistic approach to the socio-historical analysis of vernacular photos 2022

Stacchio, L., Angeli, A., Lisanti, G., Calanca, D., & Marfia, G. (2022). Towards a holistic approach to the socio-historical analysis of vernacular photos. *ACM Transactions on Multimedia Computing, Communications, and Applications (TOMM)*.

Rethinking Augmented Wine Recognition 2022

Stacchio, L., Angeli, A., Donatiello, L., Giacche, A., & Marfia, G. (2022, October). Rethinking Augmented Wine Recognition. In *2022 IEEE International Symposium on Mixed and Augmented Reality Adjunct (ISMAR-Adjunct)* (pp. 560-565). IEEE.

Digital Twin Collaborative Platforms: Applications to Humans-in-the-loop Crafting of Urban Areas

2022

Bononi, L., Donatiello, L., Longo, D., Massari, M., Montori, F., Stacchio, L., & Marfia, G. (2022). Digital Twin Collaborative Platforms: Applications to Humans-in-the-loop Crafting of Urban Areas. *IEEE Consumer Electronics Magazine*.

Applying deep learning approaches to mixed quantitative-qualitative analyses 2022

Stacchio, L., Angeli, A., Lisanti, G., & Marfia, G. (2022, September). Applying deep learning approaches to mixed quantitative-qualitative analyses. In *Proceedings of the 2022 ACM Conference on Information Technology for Social Good* (pp. 161-166).

Exploiting fashion x-commerce through the empowerment of voice in the fashion virtual reality arena

2022

Morotti, E., Stacchio, L., Donatiello, L., Roccetti, M., Tarabelli, J., & Marfia, G. (2022). Exploiting fashion x-commerce through the empowerment of voice in the fashion virtual reality arena: Integrating voice assistant and virtual reality technologies for fashion communication. *Virtual Reality*, 1-14.

Who will Trust my Digital Twin? Maybe a Clerk in a Brick and Mortar Fashion Shop 2022

Stacchio, L., Perlino, M., Vagnoni, U., Sasso, F., Scorolli, C., & Marfia, G. (2022, March). Who will trust my digital twin? maybe a clerk in a brick and mortar fashion shop. In *2022 IEEE Conference on Virtual Reality and 3D User Interfaces Abstracts and Workshops (VRW)* (pp. 814-815). IEEE.

Searching for cultural relationships through deep learning models 2022

Stacchio, L., Angeli, A., Lisanti, G., & Marfia, G. (2022). Searching for cultural relationships through deep learning models.

[Revive Family Photo Albums through a Collaborative Environment Exploiting the HoloLens 2](#) 2021

Stacchio, L., Angeli, A., Hajahmadi, S., & Marfia, G. (2021, October). Revive Family Photo Albums through a Collaborative Environment Exploiting the HoloLens 2. In *2021 IEEE International Symposium on Mixed and Augmented Reality Adjunct (ISMAR-Adjunct)* (pp. 378-383). IEEE.

[Empowering Locksmith Crafts via Mobile Augmented Reality](#) 2021

Stacchio, L., Angeli, A., & Marfia, G. (2021, September). Empowering Locksmith Crafts via Mobile Augmented Reality. In *Proceedings of the Conference on Information Technology for Social Good* (pp. 305-308).

[Preserving Family Album Photos with the HoloLens 2](#) 2021

Stacchio, L., Hajahmadi, S., & Marfia, G. (2021, March). Preserving family album photos with the hololens 2. In *2021 IEEE Conference on Virtual Reality and 3D User Interfaces Abstracts and Workshops (VRW)* (pp. 643-644). IEEE.

[IMAGO: A family photo album dataset for a socio-historical analysis of the twentieth century](#) 2020

Stacchio, L., Angeli, A., Lisanti, G., Calanca, D., & Marfia, G. (2020). Imago: A family photo album dataset for a socio-historical analysis of the twentieth century. *arXiv preprint arXiv:2012.01955*.

Projects

01/05/2022 – CURRENT

Development of an AR application for Outdoor fitness Collaboration with [Wellness Explorers](#) (Technogym) for the development of an outdoor AR experience for fitness.

01/01/2022 – 01/01/2023

Development of a Mixed Reality solution for supporting electrotechnical assembly assistance Collaboration with [Elettrotecnica Imolese](#) for the development of a prototype to visualize and annotate remote PDF files in Mixed Reality. This work has been published as:

L. Stacchio, V. Armandi, L. Donatiello and G. Marfia, "AnnHoloTator: A Mixed Reality Collaborative Platform for Manufacturing Work Instruction Interaction," *2023 IEEE Conference on Virtual Reality and 3D User Interfaces Abstracts and Workshops (VRW), Shanghai, China, 2023*, pp. 418-424, doi: 10.1109/VRW58643.2023.00091.

01/11/2020 – CURRENT

Development of a Deep Learning pipeline for the Fashion production chain Collaboration with [Aeffe s.p.a](#) to develop a Deep Learning pipeline to assist the production chain in several activities. It involves the definition and building of Image retrieval and Generative deep learning models.

30/09/2020 – 30/04/2021

Development of an AR systems for OCR Wine Recognition Collaboration with [Imageline](#) for the development of a prototype to recognize Wine Bottles based on OCR exploiting deep learning. This work has been published as:

L. Stacchio, A. Angeli, L. Donatiello, A. Giacche and G. Marfia, "Rethinking Augmented Wine Recognition," *2022 IEEE International Symposium on Mixed and Augmented Reality Adjunct (ISMAR-Adjunct), Singapore, Singapore, 2022*, pp. 560-565, doi: 10.1109/ISMAR-Adjunct57072.2022.00117.

Teaching experience

15/12/2022 – 15/02/2023

Tutor at the "Data Algorithms and Structures" course

Tutoring during the academic program in Data Algorithms and structures for students on the three-year degree course in Computer Science for Management at the University of Bologna.

The tutoring was carried out in 24 hours under the supervision of Professor Lorenzo Donatiello, and consisted in:

1. **Examination project preparation:** Preparation and implementation of some exercises proposed as the object of the examination project;

2. **Projects correction:** Support during the correction of projects handed in by students, with the generation of specific reports for each one.
3. **Oral examination support:** I supported Professor Donatiello with explanations of the corrections made to the projects during the oral examination, asking specific questions on individual projects.

31/03/2021 – CURRENT

Tutor for the "Virtual and Augmented Reality" course at the University of Bologna

The course "Virtual and Augmented Reality Laboratory" aim at teaching the fundamental theoretical principles, the hardware platforms, and the main software platforms for the design and implementation of virtual reality and augmented reality environments.

Among the various topics I taught: Virtual Reality Paradigms, C# programming, Unity basics, Unity Mobile with GoogleVR SDK, Unity and HTC-Vive with SteamVR;

Link https://github.com/lorenzo-stacchio/Virtual_Augmented_Reality_Lab_21_22

13/03/2022 – 11/04/2022

Full Teacher at the "Artificial Intelligence for fashion" course Bologna

A full academic course of the University of Bologna aimed at teaching students from both Computer Science and Fashion studies, who wish to learn both classical and new paradigms applied to solve some Fashion-related machine learning tasks.

Among the various topics, I taught: Machine and Deep learning basics, Fashion Machine Learning Tasks, Python programming and Orange as a no-code data analysis tool.

Link <https://github.com/lorenzo-stacchio/AI-For-Fashion>

01/02/2022 – 01/04/2022

Tutor at the "Data Science and Immersive Technologies for Fashion E-commerce" course at the University of Bologna

The main didactic objective of the course "Data Science and Immersive Technologies for Fashion E-commerce" at the University of Bologna is to provide the knowledge necessary to apply specific techniques of Data Science and Immersive Technologies to Fashion e-commerce.

Among the various topics, I taught: Extended Reality Paradigms, Unity, C# and Data science basics.

30/09/2021 – 18/12/2021

Tutor at the "Big Data Laboratory" course

The "Big Data Laboratory" is aimed at spreading the knowledge of big data through a seminar and collaborative approach with the students of high schools on the foundations of large data analysis.

Among the various topics I taught: Python programming, Big Data Paradigms, Machine Learning Paradigms and Machine Learning classification problems.

Link https://github.com/lorenzo-stacchio/Big_Data_Course_Rimini_2021

Honours and awards

10/09/2022 XR Salento

Best work ar XR & AI Summer School 2022 Best project work award won at XR School 2022 for the design and the implementation of an Augmented Reality mobile app for the enhancement of territorial and cultural heritage. XR School 2022 was organized by the University of Salento.

Link https://drive.google.com/file/d/1MLETPQ5erPEkU_vmA0jZA0zToAnbO_Bp/view

05/10/2021 Italian Association for Research in Computer Vision, Pattern Recognition and Machine Learning

Best work at VISMAL 2021 Prize awarded for the best work presented during the PhD session in Computer Vision at the VISMAL international Summer School "VISIONe delle MACchine" (in English, "Machine Vision"), organized by the Italian Association for Research in Computer Vision, Pattern Recognition and Machine Learning (formerly GIRPR).

Link <https://drive.google.com/file/d/1MX4hPUWAjLnumul1MKNxxj7dgDu1N6p/view?usp=sharing>

Certifications

20/02/2023 – 21/03/2023

Deep Learning Specialization

The Deep Learning Specialization is a foundational program that helped me understand the capabilities, challenges, and consequences of deep learning and prepares me to participate in the development of leading-edge AI technology.

In this Specialization, I built and train classical neural network architectures such as CNNs, RNNs, LSTMs, and Transformers, and learn how to improve them with strategies such as Dropout, BatchNorm, Xavier/He initialization, and more.

Link <https://www.coursera.org/account/accomplishments/specialization/GETC4PZ65PDK>

31/03/2021 – 07/04/2021

Generative Adversarial Networks (GANs) Specialization

Certificate of completion for 3 Generative Adversarial Network (GAN) courses.

A DeepLearning.AI specialization that allowed me to acquire classic skills in the world of machine learning which were then verticalized on the branch of GAN, which is part of the world of deep learning in order to generate new examples from known distributions.

Link <https://www.coursera.org/account/accomplishments/specialization/U3LASAVZE2DF>

31/10/2020 – CURRENT

IELTS Academy - Overall Band Score 7.0

7.0 Good User: The good user has an excellent command of the language, with occasional inaccuracies, misunderstandings, and inappropriate use in some situations. In general, he handles the language well and understands detailed reasoning.

Link <https://drive.google.com/file/d/1mFANzVtWSXGelm45bXtOEZl1Unf8jo0-/view?usp=sharing>

Ph.d. Schools

28/08/2023 – 02/09/2023

M2L - Mediterranean Machine Learning Summer School

I was accepted to the 2023 Mediterranean Machine Learning (M2L) summer school. M2L will be structured around 6 days of keynotes, lectures, and practical sessions on different ML topics, such as Deep Learning, Computer Vision, NLP, and Self-Supervised Learning.

Link <https://www.m2lschool.org/>

02/05/2022 – 07/05/2022

eXtended Reality Spring School 2022

The main aim of the eXtended Reality Spring School 2022 is to propose a privileged moment for stimulating discussions and exchanging scientific experiences and technical results related to eXtended Reality technology.

The thematic area of XR Spring School 2022 is mainly focused on AR, VR and MR technologies and applications in *healthcare* and *industry*.

Link https://drive.google.com/file/d/1aYxc_25tQuruVwnfj_nfOE68T5IK0DE/view

20/09/2021 – 23/09/2021

VISMACH - International Summer School of Computer Vision

The VISMACH International Summer School "VISione delle MACchine" (in English, "Machine Vision") aims at providing a common scientific and cultural background on the themes of computer vision and pattern recognition.

This edition of VISMACH focused on Bio-imaging, Automotive, Culture Heritage, Image Forensics.

Link https://drive.google.com/file/d/11WWdLfwndmAN97pyGg_AJNG3gDZhxpbh/view?usp=sharing

27/04/2021 – 28/04/2021

CVML Short Course - Machine Learning and Deep Neural Networks

Short course focused on Machine and Deep Learning Theory, their applications in the different domains mentioned above, and the new challenges ahead.

Link https://drive.google.com/file/d/1aLFDcZttduiu-5qbAgWE_1TtqcXGpKtA/view