

Ilaria Manco

+1 415 595 0568 | manco.ilaria@gmail.com | linkedin.com/in/ilaria-manco | github.com/ilaria-manco

Education

Queen Mary University of London

Sep 2019 – Nov 2024

PhD, Artificial Intelligence & Music

Thesis Title: Learning Music Representations from Audio and Language

Imperial College London

Oct 2014 – Jun 2018

MSci, Physics

Selected modules: Computational Physics, Statistical Mechanics, Complexity & Networks, Quantum Information, Computational Neuroscience, Information Theory, Advanced Machine Learning

Experience

Google DeepMind – San Francisco, USA

Jan 2025 – present

Research Scientist

Research in music understanding and generation, with a focus on controllable and real-time generative models.

Google DeepMind – London, UK

Nov 2023 – Feb 2024

Student Researcher

Research in music representation learning. Hosts: Antoine Caillon and Ethan Manilow (Magenta).

Adobe – San Francisco, USA

Jul 2023 – Oct 2023

Research Scientist / Engineer Intern

Conducted studies on data- and parameter-efficient techniques for multimodal audio-text contrastive learning. Advisors: Oriol Nieto and Justin Salamon (Audio Research Group).

Sony – Tokyo, Japan

Jul 2022 – Oct 2022

Research Scientist Intern

Developed a new discrete diffusion model for generating musical accompaniments conditioned on audio and lyrics. Advisors: Marco Martínez and Wei-Hsiang Liao (AI & Music Technology Group).

Quantexa – London, UK

Oct 2018 – Sep 2019

Data Scientist

Designed and built data models for network analytics with applications to fraud detection, risk scoring and transaction monitoring. Implemented data pipelines for distributed data processing.

Iris.ai – Berlin, Germany

Jul 2018 – Aug 2018

Research Intern

Developed a novel word sense disambiguation model to improve the natural language understanding pipeline used in production.

Selected

Publications

A. Caillon, B. McWilliams, C. Tarakajian, I. Simon, **I. Manco** *et al.* *Live Music Models*. 39th Annual Conference on Neural Information Processing Systems (NeurIPS) Creative AI Track, 2025

I. Manco^{*}, B. Weck^{*} *et al.* *Evaluating Music Understanding in Multimodal Audio-Language Models*. 25th International Society for Music Information Retrieval Conference (ISMIR), 2024

I. Manco, J. Salamon, O. Nieto. *Augment, Drop & Swap: Improving Diversity in LLM Captions for Efficient Music-Text Representation Learning*. 25th International Society for Music Information Retrieval Conference (ISMIR), 2024

I. Manco^{*}, B. Weck^{*} *et al.* *The Song Describer Dataset: a Corpus of Audio Captions for Music-and-Language Evaluation*. Machine Learning for Audio Workshop (MLA at NeurIPS), 2023

I. Manco, E. Benetos, E. Quinton, G. Fazekas. *Contrastive Audio-Language Learning for Music*. 23rd International Society for Music Information Retrieval Conference (ISMIR), 2022

	I. Manco , E. Benetos, E. Quinton, G. Fazekas. <i>Learning Music Audio Representations via Weak Language Supervision</i> . International Conference on Acoustics, Speech, & Signal Processing (ICASSP), 2022	
	I. Manco , E. Benetos, E. Quinton, G. Fazekas. <i>MusCaps: Generating Captions for Music Audio</i> . International Joint Conference on Neural Networks (IJCNN), 2021	
Public Projects	ISMIR Tutorial	2024
	Tutorial on Connecting Music Audio and Natural Language	
	MuChoMusic	2024
	Benchmark for evaluating music understanding in multimodal audio-language models	
	Song Describer	2022
	Data annotation platform for collecting textual descriptions of music audio recordings	
	Word2Wave	2021
	Simple method for text-controlled audio generation with WaveGAN and audio-text embeddings	
	Spatial Scaling in Human Mobility Models (Master’s Thesis)	2018
	Study of spatial interactions via modelling and analysis of human flows using simulation and data-based approaches. Includes a framework for hierarchical clustering of spatial data	
Honours & Awards	Best Paper Award	2024
	25th International Society for Music Information Retrieval (ISMIR) Conference	
	Enrichment Scheme Placement Award	2021
	The Alan Turing Institute	
	DLRL Summer School (Selected Attendee)	2020
	Canadian Institute for Advanced Research (CIFAR) and Mila	
	PhD Studentship	2019
	UK Research and Innovation (UKRI)	
Invited Talks	NeurIPS Workshop on AI for Music “ <i>Real-time Music Generation: Lowering Latency and Increasing Control</i> ”	2025
	Universal Music Group “ <i>Music & Language Models</i> ”	2023
	Sony R&D “ <i>Contrastive Audio-Language Learning for Music</i> ”	2022
	Singapore University of Technology & Design “ <i>Bridging Audio and Language to Improve Automatic Music Understanding</i> ”	2022
	Neural Audio Synthesis Workshop “ <i>Text-guided Audio Generation with Word2Wave</i> ”	2022
	Intelligent Sensing Winter School “ <i>Learning Music Audio Representations via Weak Language Supervision</i> ”	2022
Activities & Service	Mentor Widening Inclusion in Music Information Retrieval (WIMIR)	2025
	Special Track Co-Chair International Joint Conference on Neural Networks (IJCNN)	2025
	Co-organiser Workshop on NLP for Music and Audio (NLP4MusA)	2024-2025
	Sponsorship Co-chair ISMIR 2023	2023
	Program Co-chair 2nd Workshop on Human-Centric Music Information Research	2023
	Co-organiser Italian Music Tech Meetup	2022-2023
	Reviewer ICASSP, TASLP, ISMIR, WASPAA, EURASIP, ICLR (workshop)	2021-2024
	Master’s Project Co-supervisor Multimodal Zero-Shot Learning for Music	2022
	Volunteer Women in Machine Learning Workshop (NeurIPS)	2020
	Teaching Assistant Postgraduate Machine Learning module (ECS708P)	2020

Languages
& Skills

Italian (native), **English** (fluent), Spanish (conversational)
Python (PyTorch, Jax, NumPy, SciPy, pandas, Matplotlib, librosa), Git, CUDA, AWS, Scala (prior experience)