

# Ilaria Manco

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## Education

### **Queen Mary University of London**

*PhD, Artificial Intelligence & Music*

Sept 2019 – present

Project: Multimodal Deep Learning for Music Information Retrieval

### **Imperial College London**

*MSci, Physics*

2014 – 2018

Modules include: Computational Physics, Statistical Mechanics, Complexity & Networks, Quantum Information, Computational Neuroscience, Information Theory

## Experience

### **Quantexa**

Oct 2018 – Sept 2019

*Data Scientist*

Designed and built data models for network analytics with applications to fraud detection, risk scoring and transaction monitoring. Implemented big-data ETL pipelines in Scala for distributed processing of raw financial data. Gained experience in Linux, Git, continuous integration and deployment tools (Jenkins, Nexus), big-data frameworks & tools (Apache Spark, Elasticsearch) and cloud computing platforms

### **Iris.ai**

Jul – Aug 2018

*Machine Learning Researcher*

Developed a new natural language processing algorithm for word sense disambiguation and proposed new classification and clustering algorithms based on word embedding models

### **UBS**

Jun – Aug 2017

*Technology Intern*

Optimised the monitoring process of the IT infrastructure by developing a tool to automate data analyses on multiple datasets and visualise the results on a near-real-time dashboard

## Projects

### **Deep Learning for Audio & Music**

April 2020

Implemented a CNN-based model for audio feature extraction in PyTorch

### **MSci Thesis on Human Mobility Models**

May 2018

Studied spatial interactions via modelling and analysis of human flows using simulation and data-based approaches. Developed a framework for hierarchical clustering of spatial data

## Languages & Skills

Italian (native), English (fluent), Spanish (conversational)

Python (PyTorch, Keras, Pandas, NumPy, SciPy), Scala, Apache Spark, Elasticsearch

## Awards & Achievements

### **Enrichment Scheme Award, The Alan Turing Institute**

Jan 2021

Successful application to join the programme as part of my PhD research

### **Selected Attendee, DLRL Summer School**

Aug 2020

Deep Learning Reinforcement Learning Summer School organised by CIFAR and Mila

### **PhD Studentship, UKRI CDT in Artificial Intelligence and Music**

Sept 2019

Awarded a full research studentship for a 4-year PhD programme

### **Best Research Proposal, Imperial College London**

Mar 2018

Awarded the 1<sup>st</sup> prize for a team project on Quantum Key Distribution

### **Travel Grant, Norwegian Customs**

Oct 2017

Grant to attend a research hackathon on machine learning for object identification