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Julien Guinot

PhD student at AIM - Queen Mary University of London

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EDUCATION

PhD, AI and Music - Queen Mary University of London, Universal Music Group

2023 - 2028

- PhD:** Disentangled Human-in-the-loop self-supervised learning for musical audio: towards navigable and interpretable musical representations. **My PhD project focuses on refining self-supervised learning techniques for musical audio, to create interpretable, navigable and explainable learned representations**

MSc Engineering, BSc Engineering - Ecole Centrale de Lyon

GPA: 3.6/4

2018 - 2022

- Coursework:** Python, C++, Acoustics, Musical Acoustics, Signal processing. Statistics, Machine Learning.
- Master's thesis:** Implementation of audio tagging models at scale towards better musical recommendations. (A+)
- Research project:** 6-month research project on acoustic diodes in monodirectional waveguides

MSc Engineering – Study Abroad - University of Adelaide.

GPA: 5.86/7

2021-2022

- Coursework:** Deep Learning, Natural Language Processing, Computer Vision, Acoustics, Signal Processing, Machine Learning, Statistics
- Project:** Music Information Retrieval– Vocalist classification via spectrogram computer vision. ([Github](#))

EXPERIENCE

Research Scientist Intern

February 2023 – August 2023

Sony CSL (Under the supervision of Stefan Lattner)

Paris, France

- Worked on symbolic music generation of basslines conditioned on audio accompaniment
- Yet-to-be published paper: **Audio-conditioned symbolic music generation**

Junior data scientist

October 2022 – January 2023

Believe

Paris, France

- Led YouTube royalties bad revenue classification towards predicting bad copyright claims on Believe-owned assets
- Implemented data ingestion pipelines and reached 93% accuracy on fraudulent revenue prediction

Data Scientist / Music Information Retrieval Scientist Intern

April 2022 – Present

Groover

Paris, France

- Implemented audio tagging at scale towards better musical recommendations: Built seven state of the art music tagging models, reaching 92% tag prediction accuracy (ROC-AUC). Up to this point, users manually annotated their music.
- Designed full audio processing pipeline – Fetching data, downloading & converting to spectrograms – on 1M tracks.

Research Intern

March 2020 - July 2020

IRCAM

Paris, France

- Conducted research towards active control of the first vibrational modes of a cello string using MATLAB, reaching 3% spectral error.

RESEARCH INTERESTS

Self-Supervised learning for Musical Audio, Representation Learning. Multimodal learning. Human-in-the-loop for music. Music retrieval, Foley retrieval. Text-to-Music generation and understanding. Music Automatic Captioning. Music Information Retrieval. Audio effects with machine learning. Disentangled latent spaces for music.

SKILLS

Languages and Packages

Python, Pytorch, TensorFlow, SQL, C++, Javascript, React, Git, Github, AWS, Jenkins, LaTeX

Quantitative

Deep Learning, Music Information Retrieval, NLP, Computer Vision, Statistics, Signal processing, Acoustics.

Creative and Music

Ableton, FL Studio, Photoshop, Premiere, Illustrator

MUSIC

Instruments

10-year Guitarist, Bassist, Keyboardist. vocalist. DJ.

Performance

Bass vocalist in SATB choir for 2000-audience musical. Choir leader the following year ([Link](#))

Composition

Soundtrack for trailer of animated series with ancient maya theme ([Link](#))

Production

Disco House Track – LikeTHAT ([Link](#))

Arrangement

Let it Snow ([Link](#)) for SATB choir - Santiana ([Link](#)) & Misty mountains ([Link](#)) for solo choir

ACTIVITIES AND PROJECTS

President of DJ society

Presided over a 16-member DJing and sound engineering student society.

Mixing Engineer

Three years as sound engineer for a student musical. Mix engineer for the album of 24-track orchestral arrangements ([Link](#))