

Lenny Renault

RECENTLY GRADUATED WITH A PH.D. IN COMPUTER SCIENCE

Looking for a postdoc position as a Research Scientist in AI assisting Music Creation and Production.

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Skills

- Expertise** Neural Audio Synthesis, Differentiable Digital Signal Processing, Symbolic Music Processing, Music Information Retrieval.
- Programming** Python (Tensorflow, PyTorch), C/C++ (JUICE, Kaldi, openGL), Docker, Git, LaTeX, Bash.
- Languages** French (native), English (Fluent: C1), Chinese (Intermediate: HSK3), Spanish (Intermediate: B1), Japanese (Initiated: A2).

Education

Ph.D. – Neural Audio Synthesis of Realistic Musical Performances

IRCAM & SORBONNE UNIVERSITY - STMS LAB

- Supervised by Dr. RÉMI MIGNOT and Dr. AXEL ROEBEL.

Paris, France

December 2020 - July 2024

Master of Science in Computer Science – ATIAM

IRCAM & SORBONNE UNIVERSITY

- Master's Degree in Acoustics, Signal Processing and Computer Science applied to Music.

Paris, France

September 2019 - September 2020

Master of Science in Engineering / Diplôme d'Ingénieur

TÉLÉCOM PARIS (INSTITUT POLYTECHNIQUE DE PARIS)

- Major in Signal Processing applied to Machine Learning (TSIA). Minor in Computer Graphics and Human-Computer Interactions (IGR).

Paris, France

September 2017 - September 2020

Musical Studies Certificate – Piano

MUNICIPAL SCHOOL OF ARTS

- Musical Studies Certificate (CEM) in classical piano with Highest Honors after completing the three study cycles.

Joinville-le-Pont, France

September 2005 - June 2019

Work Experience

Deezer Research

RESEARCH SCIENTIST INTERN

- Master's internship on Singing Language Identification. Led to a publication in ICASSP 2021.

Paris, France

February 2020 - August 2020

Halftime Hotel Group

WAITER

- Waiter in the La Pause, Kaon and Nara National Museum cafes, belonging to the Halftime Hotel group.

Nara, Japan

August 2018

Publications

Expressive Piano Performance Rendering from Unpaired Data

LENNY RENAULT, RÉMI MIGNOT, AXEL ROEBEL

- Render expressive performances from weakly-informed scores without supervised training on score-performance pairs.

DAFx23, Copenhagen - Denmark

September 2023

DDSP-Piano: a Neural Sound Synthesizer Informed by Instrument Knowledge

LENNY RENAULT, RÉMI MIGNOT, AXEL ROEBEL

- Journal extension of the DAFx20in22 paper. Published in the Special Issue on *New Trends in Audio Effects II*.

J. Audio Eng. Soc., vol. 71, no. 9

September 2023

Differentiable Piano Model for MIDI-to-Audio Performance Synthesis (Best Paper Award)

LENNY RENAULT, RÉMI MIGNOT, AXEL ROEBEL

- DDSP-based piano model incorporating high-level acoustic modeling knowledge for handling specificities of the piano sound.

DAFx20in22, Vienna - Austria

September 2022

Singing Language Identification using a Deep Phonotactic Approach

LENNY RENAULT, ANDREA VAGLIO, ROMAIN HENNEQUIN

- Modernized phonotactic system for Singing Language Identification on polyphonic music. Trained and evaluated on the public DALI dataset.

ICASSP 2021, Online

June 2021

Community Services

ORGANIZATION AND PROGRAM COMMITTEES

- Reviewer for DAFx24. Organizer for the Young Researchers' days on Hearing, Music Acoustics and Audio Signals (JJCAAS) 2023.

Extracurricular Activity

MUSIC, SPORTS AND TRADING CARD GAMES

- Music:** guitarist in Unheaven (since 2017), keyboardist in Marchands de Groove (2023-2024), pianist in a jazz band (2017-2020).
- Sports:** kickboxing (2025), karate-koshiki (2022-2025), blue belt in karate-jutsu (2020-2024), table tennis (2009-2014).
- TCG Judge** in Yu-Gi-Oh! tournaments (Nationals: UK 2024, France 2025. YCS: Birmingham 2025, Lille 2025, Bologna 2025).