



Email

ninon.devis@ircam.fr

Website

<https://ninon-io.github.io>

Major Project

Neurorack

(Nvidia Award 2022)

SKILLS

Programming

Python ●●●●●○

Java ●●●○○○

Deep & Machine Learning

Algorithms

Neural Network Architectures

Pytorch Framework

DAWs

Ableton ●●●●●○

Ardour ●●●●○○

Bitwig ●●●●○○

FL Studio ●●●○○○

Audio Language

Max MSP ●●●●○○

Pure Data ●●●●○○

Additional Proficiencies

DSP, Hardware,

Audio synthesis & visualization,

Features extraction,

Sound design

NINON DEVIS

Creative Deep Learning

QUALIFICATIONS

2020–2023 Ph.D Degree IRCAM/SCAI (Sorbonne Center for Artificial Intelligence)

Subject: Lightweight deep learning on real-time embedded architecture

- Real-time neural audio synthesis through deep generative models.
- Interactive musical instruments with model controls development.
- Interface design & embedding into hardware synthesizer.
- Reflective study on AI's artistic applications and interviews with artists.

2019–2020 Master's Degree IRCAM (Inst. Research & Coordination Acoustics/Music)

Signal Processing, Acoustics and Computer Science applied to music
Valedictorian in Machine Learning: 17/20

2012–2015 Engineering Master's Degree ESTP (Special school for public work)

Multidisciplinary Master

2009–2012 Preparatory Classes

Lycée Condorcet

Dominant of physics and chemistry

2008–2009 High School Diploma of Sciences

Lycée Hélène Boucher

Major in mathematics

WORK EXPERIENCE

Native Instruments Audio Research Engineer Berlin

Research team Music software development deep learning based

I 2023 – Today

Google – Brain Invited Student Researcher Paris | Tokyo

Magenta team Control of generative models, prior divergence.
I 2023 Development of a lightweight model to control real-time audio synthesis through prior generation.

Squarp Instruments Research Internship Valedictorian: 17.2/20 Paris

I 2020 Deep generative models implementation for MIDI melodies generation, model reduction study for embedding into a hardware sequencer.

Behles & Jochimsen End-of-course Internship Berlin

I 2015 Engineer/Architect

TEACHING POSITION

2019–2023 Lecturer – Master 2 level IRCAM

Pure Data & Ableton Live
Creation of all educational materials: courses, practical work, exams.
Musical Machine Learning
3 months projects

2019–2021 Tutor Sorbonne University

Cryptology & Cyber security – Master 1 level
Java – Bachelor's degree level

2016–2017 High school and Higher Technical Level Teacher Lycée Dorian

Physics, chemistry and applied physics teacher
10th and 11th grade, Higher Technical Certificate levels.
Creation of all educational materials: courses, practical work, exams.

GRANTS

- Doctoral grant: Sorbonne Center of Artificial Intelligence (3 years)
- JSPS doctoral Fellowship for Reseach in Japan (1 year) at Tokyo University

QUALITIES

Hardworker Creative
Rigorous Passionate
Pro-active Pedagogue
Organized Innovative

LANGUAGES

French Native
English Fluent (C1)
German Basic (A1)
Japanese Basic (A1)

ABOUT

Music
composition

Hardware

Modular synthesizer
Iridium synthesizer
Maschine
Oktatrack Elektron
Ableton push 2
Upright piano Kawai
Zoom H2N recorder

Software

Kontakt, Massive
Omnisphere, Ozone
Trash 2, Pigments
Z3ta, Neutron,
Serum, Soundtoys...

Interests

Litterature
Travels (+20 countries)
Jewelry making
Calligraphy

PUBLICATIONS

2024	UNDER REVIEW	ISMIR
	Nercessian, Imort, Devis , Blang	
2023	Continuous descriptor-based control for deep audio synthesis	ICASSP
	Devis , Demerle, Nabi, Genova, Esling	
2023	The ACIDS Research project	VDT Magazin
	Bindi, Caillon, Chemla, Demerle, Devis , Douwes, Esling, Genova, Nabi	
2021	Neurorack: deep audio learning in hardware synthesizer	EPFL Seminar
	Devis , Esling	
2021	L'avenir de la créativité musicale sera-t-il artificiel ?	The Conversation
	Devis	
2020	Creativity at the era of artificial intelligence	JIM Keynote article
	Esling, Devis	
2020	Diet deep generative audio models with structured lottery	DaFX
	Esling, Devis , Bitton, Caillon, Chemla, Douwes	
2020	Ultra-light deep MIR by trimming lottery tickets	ISMIR
	Esling, Devis , Bitton, Caillon, Chemla, Douwes	

CONFERENCES & SEMINARS SPEAKER

2024	Can AI create Art ?	Sorbonne University (France)
2023	Signal Processing in the AI era	ICASSP (Greece)
2022	ACTOR Project	The University of the Arts, Calgary (Canada)
2022	The Art Intelligence Seminar	The University of the Arts, Calgary (Finland)
2022	Presentation of the Neurorack	Superbooth (Germany) Synthfest (France)
2021	Digital Humanities Seminar	EPFL, Lausanne (Switzerland)
2021	Presentation of the Neurorack Project for Raster Noton	IRCAM (France)
2021	AI, Music and Incarnation	Collegium Musicae & SCAI (France)
2021	AI, Art and Creativity	CNRS (France)

CERTIFICATIONS

2020	Professional training in Max MSP	IRCAM
	Certification obtained	
2019	Workshops	Berlin
	Composition, Mixing & Mastering	
2019	Construction of Eurorack modules	Paris
	Construction of analog modules from recycled components	
2018	Intensive training Ableton & Max for Live	Melbourne
	With John Sned	
1998-2008	Piano and music theory	Conservatoire Charles Munch , Paris

EXTRA- PROFESSIONAL CAREER

2018-2019	Volunteer teacher	Epitech, Paris
	Computer-assisted musical composition using Ableton and Max for live software, within an engineering school.	
2013-2016	Head of the artistic department	Keller, Zürich
	Organization of events around electronic music & workshops	
2014	Association President	Sound ETP, Paris
	Creation and management of electronic music association.	