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Jeremy Uzan

Born and raised in France, Paris, I currently live in Los Angeles, California, USA. I am proudly a green card holder, immediately eligible to work anywhere in the United States with (no visa needed). As an Audio Machine Learning Engineer with 7 years of expertise, I am passionate about advancing AI technology and commercialization.

Work Experience

October 2024 - today **Universal Music Group, Los Angeles, CA** *Director, AI And Advanced Technology.*
Part of the Digital Strategic team.
- Lead UMG's strategy in AI and security
- Develop music use cases and requirements within the C2PA (Coalition for Content Provenance and Authenticity) standard.

April 2022 - August 2024 **MYTI.ai Miami, FL** *Senior Audio and Machine Learning Engineer.*
MYTI provides an innovative non lethal security system using computer vision, sound and laser. I evolved from an Engineer position to a lead technology position, reporting directly to the CEO and CTO. Collaborating between our onsite development team and offsite remote team, I helped integrate the company's visions and ideas into commercial technology and features.
- Ensure stability and reliability of the audio system, including software (Max/MSP, ArmoniaPlus, Dante Virtual Soundcard) and hardware (25 beams speaker, subwoofer, Amplifiers, drones).
- Implement additional software modules in Python and QT framework. Contributed to the integration of new audio payloads embedded on drones, utilizing ESP32 and Arduino code.
- Led investor group demonstrations, attributing to raising 8 million dollars of capital.
- Conduct QA Testing and led sprint planning with Agile SCRUM methodology.

March 2021 - March 2022 **SONY : Computer Science Lab Paris** *Audio Machine Learning Engineer*
SONY CSL Paris Music team aims at developing new AI music tools for artist to enhance their creativity. Developed and deployed a proof-of-concept compressed generative AI model on Raspberry Pi. Successfully deployed AI-driven real-time audio enhancement tools for next-gen hearing aids, resulting in improved acoustic perception across diverse environments.
- Implemented distillation and pruning techniques for compression of a deep learning model called DrumGAN. Generative AI for music.
- Embedded AI mixing model on tiny CPU devices (Raspberry/Smartphone).

May – October 2019 **Capgemini : Sogeti Tech Lab Paris** *Machine Learning Engineer Intern*
- Worked with Scrum Agile methodology in the Data/AI cluster
- Completed a research project in natural language processing (Spacy, BERT, StanfordNLP) for entity recognition and automatic summary

January – June 2018 **Studio Cercle Rouge Paris** *Sound Engineering Assistant*
- Produced music with two wel-known French producers who specialize in film score
- Set up recordings, helped mix the sounds, contributed ideas in the project.

Technical Skills

Languages Python, C++, Rust, SQL

Libraries PyTorch, TensorFlow, Keras, Spacy, Magenta, CUDA

Methodology, Worktools GitHub, Agile SCRUM, Trello, Slack

Cloud and Platforms : Docker, Spark, Azure, GitHub, Trello, Slack

Frameworks and Software Max/MSP, Ableton, ProTools, QT

Education

2020-2021 **IRCAM (Research Institute for Computer Music and Acoustics)** *MSc ATIAM, Paris*
Focus : Machine Learning : GANs, Variational Autoencoders, data generation methods in Latent Space. Signal Processing : Mel algorithms, Klapuri method, source separation. Acoustics : Perception, HRTF, 3D sound, hearing aid, instrument synthesis, impulse response synthesis for reverberation and room acoustics.

2018-2020 **École Polytechnique and Sorbonne University** *MSc Mathematical Modelling and Machine Learning*
Focus : Mathematical Methods in Biology, Stochastic Calculus, Mathematical Methods for Neurosciences, Cloud Computing, ML and Neural Networks, GPU Based Parallel Programming.

2014-2017 **Sorbonne University and UPMC** *Bachelor in Applied Mathematics (Graduated with honors), Paris*
Focus : Statistics, Probability Theory, Partial Differential Equations (Python) Statistical computing in Rstudio, C++

2013-2014 **Lycée Helene Boucher** *Preparatory Class, Paris*
Intensive preparation courses in Maths, Computer Science, Philosophy, Geopolitics, English and Spanish.

Publications and Achievements (click here)

2021 ***"Compressing audio generative models for embedded device"*, Research Paper SONY CSL**
Compressing techniques for neural networks allows for speeding up inference reducing energy consumption. With a compressed version of our drum generative model, we consider embedding the pluggin on tiny device like Raspberry, Jetson Nano, Smartphones .

2021 ***"Learning controls and interactions for DDSP"*, Research Paper IRCAM**
In a lot of Machine Learning problems, we try to reduce the dimensionality of the data. Variational Autoencoder (VAE) is a very popular method that is used in many recent papers

June 2018 **Data Scientist Competitor** *Frenchdata*
Competed to create the best predicted model that estimates the time lapse to sell a specific commercialized product. 74th out of 350 data scientists 15 variables (coding on Python)

April-May 2020 **Professional Scrum Master and Scrum Developer**

September 2019 **Capgemini Hackathon - Innovative Medical App**
Achieved 2nd place with a Smart Medicine Mobile App

Projects

2021 **Web App Audio**
This project highlights the potential of Audio Web App in the context of Cross platform capabilities. A youtube Tutorial is attached. Simple sine synthesis using a Tone Js library and a spectrogram. The piano notes can be played from yout computer keyboard.

2019 **Brain Machine Interface** *Machine Learning for EEG classification*
Developed EEG-based Brain-Machine Interface (BMI) system using AI to decode neural signals, enabling real-time control of prosthetics, communication devices, and computer systems. Retrained machine learning models to generate precise control commands from EEG data.

2017-Present **Artist Project Manager : Digital Distribution, Artistic Direction, Mixing and Mastering**
Managed digital release distribution via Distrokid and Routenote. Submitted catalog to SACEM and contributed to mixing and mastering for the artist's projects.

Language Skills and Interests

Languages French, English and Spanish (Working Proficiency), Chinese and Russian (Beginner)
Dance Breakdance (2007-2014), Cuban Salsa and Dance House (2016 – present)
Interests Acrylic painting, Music production, Vinyl collector