Maxime **Poli**

Master's degree student at École des Ponts ParisTech



EXPERIENCE

June 2020 December 2020

Research Engineer Intern, École Normale Supérieure - INRIA, CoML Team

- > I implemented speech features extraction algorithms in shennong, a toolbox based on Kaldi in development in the Cognitive Machine Learning team. Supervised by Emmanuel Dupoux.
- > Vocal tract length normalization, a speech normalization technique aiming to compensate for the fact that speakers have vocal tracts of different sizes, by warping the frequency-axis of the spectra of the speaker by a learned factor.
- > A pitch detection algorithm based on a deep convolutional neural network operating directly on the time-domain waveform input.

Speech Processing | Machine Learning | Deep Learning | Kaldi | Pykaldi | Keras

November 2019 August 2020

Student facilitator, GOOGLE, Explore Machine Learning program

- > Organize and facilitate Explore Machine Learning Workshops at my campus.
- > There are 3 tracks of Machine Learning Content (Beginner, Intermediate, Advanced) and the Workshops are intended for around 50 students at a time.
- > Share feedback and best practices with the Explore ML Team at Google and with the other facilitators.

Deep Learning Keras Tensorflow

EDUCATION

2018 Master's degree, Applied Mathematics and Computer Science, École des Ponts ParisTech

2022

> Computer Science, Machine Learning, Computer Vision, Statistics and Data Analysis, Optimization, Spectral Analysis, Operational Research.

2016 Preparatory classes, Lycée Montaigne

2018

> Preparatory classes for the highly competitive entrance exams to the *Grandes Écoles*. Intensive preparation in Maths and Physics.



Languages

English: proficient, C2, TOEIC score: 975/990; French: native; Spanish: conversational, B2

Programming / Web

Python, C / C++, bash, R, OCaml, HTML / CSS, JavaScript

Machine Learning Tensorflow, Keras, scikit-learn, PyTorch



VOLUNTARY WORK

February 2019 February 2020

Vice-president in charge of Social Open-mindedness, DÉVELOP'PONTS, École des Ponts ParisTech

- > I organized voluntary tutoring sessions for around 80 pupils between 11 and 17 years old from local schools, to make them discover science in a fun way; and I organized voluntary homework help sessions for high-school pupils.
- > I prepared experiments with our team of 5 members among the organization and, as Vice-president, I planned museum visits and managed relationships between Dévelop'ponts and the École des Ponts.

September 2018 June 2019

Tutor, DÉVELOP'PONTS, École des Ponts ParisTech

- > I conducted the tutoring sessions with other students, in addition to preparing them.
- > Chemistry and physics experiments, 3D printing, introduction to programming, Arduino projects.

PROJECTS

Movie genre classification based on poster images with DNN Tetris AI with a genetic algorithm Schedule maker website Nonlinear model reduction applied to conservative PDEs

