ANTOINE RATOUCHNIAK   https://antoinertk.github.io/

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RESEARCH INTERESTS

My research interests are the applications of artificial intelligence to neurosciences, signal processing and computer vision.

EDUCATION

2023 - 2024 **M.Sc. in mathematics and artificial intelligence, MVA**   ENS Paris-Saclay, France
Coursework: convex optimization, probabilistic graphical models and deep generative models, machine learning for time series, geometric data analysis, topological data analysis for imaging and machine learning, introduction to numerical imaging, bayesian machine learning, kernel methods in machine learning, algorithms for speech and natural language processing, mathematics for neurosciences, deep learning for medical imaging, deep reinforcement learning

2022 - 2023 **Research Year in Artificial Intelligence**   ENS Paris-Saclay, France
Coursework: foundations of AI, AI for images and videos, AI for natural language processing, AI for time series, object recognition and computer vision (MVA) and image denoising (MVA)

2021 - 2022 **M.Sc. in mathematics and artificial intelligence**   Paris-Saclay University, France
Coursework: probability, statistics, machine learning, deep learning, natural language processing, algorithms and data stuctures, graph theory, information theory, mathematics for artificial intelligence, optimization and introduction to image processing

2018 - 2021 **B.Sc. in mathematics and computer science**   Gustave Eiffel University, France
Top 5% for three consecutive years

WORK EXPERIENCE

03/2023 **New York University**, **NYU Video Lab**   New York City, United States
Present   Internship on critical regions prediction for language processing from ECoG data under the supervision of Yao Wang and Adeen Flinker

11/2023 **ENS Paris-Saclay, Centre Borelli, HIA Bégin**   Gif-sur-Yvette, France
3 months   Internship on time series analysis from EEGs of patients in intensive care unit under the supervision of Laurent Oudre and Clément Dubost

04/2023 **ENS Paris-Saclay, Centre Borelli**   Gif-sur-Yvette, France
3 months   Internship on image processing and deep convolutional networks under the supervision of Enric Meinhardt-Llopis

2019 - 2021 **Piano teacher**   France
Piano lessons for beginners and intermediate students

ADDITIONAL EDUCATION

06/2019 **Music diploma**   Noisiel, France
Music diploma in piano and music theory obtained with honors

SKILLS & INTERESTS

Languages   French (native), English (fluent: TOEFL 107/120), Spanish (intermediate)

Programming Java, Python (scikit-learn, PyTorch), C, PHP, JavaScript, Git, MATLAB

Sport   Running, Fitness, Judo