## ANTOINE RATOUCHNIAK

https://antoinertk.github.io/

## antoinertk@meta.com

## **WORK EXPERIENCE**

## Meta Platforms, FAIR (Fundamental Al Research)

05/2024 - Present

Research Scientist Intern

London, United Kingdom

Leveraging pre-training across different brain decoding tasks (image, speech and word) within the Brain & Al team supervised by Hubert Jacob Banville and Jean Remi King

#### New York University, NYU Video Lab

03/2023 - Present

Visiting Researcher

New York City, United States

Working on critical regions prediction for language processing from ECoG data under the supervision of Yao Wang and Adeen Flinker

# ENS Paris-Saclay, Centre Borelli, HIA Bégin

11/2022 - 01/2023

Research Intern

Gif-sur-Yvette, France

Time series analysis from EEGs of patients in intensive care unit under the supervision of Laurent Oudre and Clément Dubost

## **ENS Paris-Saclay, Centre Borelli**

04/2022 - 07/2022

Research Intern

Gif-sur-Yvette. France

Image processing and deep convolutional networks under the supervision of Enric Meinhardt-Llopis

#### **EDUCATION**

**ENS Paris-Saclay** 2023 - 2024

M.Sc. in mathematics and artificial intelligence, MVA

Gif-sur-Yvette, France

Coursework: convex optimization, probabilistic graphical models, computational optimal transport, time series, geometric data analysis, numerical imaging, bayesian machine learning, kernel methods, algorithms for speech, mathematics for neurosciences, deep learning for medical imaging, generative models for images

**ENS Paris-Saclay** 2022 - 2023

Research Year in Artificial Intelligence

Gif-sur-Yvette, 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)

#### **Paris-Saclay University**

2021 - 2022

M.Sc. in mathematics and artificial intelligence

Orsay, France

Coursework: probability, statistics, machine learning, deep learning, natural language processing, algorithms and data structures, graph theory, information theory, mathematics for AI, optimization and image processing

#### **Gustave Eiffel University**

2018 - 2021

B.Sc. in mathematics and computer science

Champs-sur-Marne, France

Top 5% for three consecutive years

## **PUBLICATIONS**

# Deep learning models based on neurophysiology to predict language cortex stimulation

2024

A. Ratouchniak, J. Chen, X. Chen, A. Khalilian-Gourtani, Y. Wang, A. Flinker

In progress

### ADDITIONAL EDUCATION

Music diploma 2019

Music diploma in piano and music theory obtained with honors

# **SKILLS & INTERESTS**

**Languages** French (native), English (fluent), Spanish (intermediate), Chinese (basic)

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

**Sport** Running, Fitness, Judo