

MARIANO RODRIGUEZ

Mathematics, Computer Vision, Language Models & Machine Learning

CONTACT

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🌐 French & Cuban

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👤 <https://rdguez-mariano.github.io>

EDUCATION

PhD in Computer Vision and Machine Learning
École Normale Supérieure Paris-Saclay

2016 - 2020

Under the supervision of Jean-Michel Morel and Julie Delon.

Masters 2 'Mathématiques, Vision, Apprentissage'
École Normale Supérieure Paris-Saclay

2015 - 2016

🏆 Highest Honors.

Masters 1 'Mathématiques et Modélisation'
Université Paris Cité

2014 - 2015

🏆 Highest Honors.

Undergraduate studies in Mathematics
Universidad de La Habana

2007 - 2011

🏆 Highest Honors.

WORK EXPERIENCE

Machine Learning Engineer (Full-time position)
Gladia, Paris

Jan 2023 - Today

Main projects: Optimized version of Whisper for fast transcriptions, diarization (e.g. pyannote) and voice activity detection (e.g. silero).

- NVIDIA Triton Servers
- ONNX
- FastAPI
- PyTorch
- Kubernetes
- Flame Graphs
- Docker
- PyTest

Machine Learning Engineer (Full-time position)
Powder, Paris

Jul 2021 - Jan 2023

Main projects: Event/highlight detection in video games; Detecting games in videos; Spoken language identification.

- AWS Sagemaker
- PyTorch Lightning
- Comet & WandB
- Selenium
- Github CI
- TensorFlow
- Gin Config
- SQLAlchemy & Postgres
- CookieCutter
- ONNX & CoreML
- PyTest (Fixtures & Mocks)
- Flask & Gunicorn

Postdoctoral Researcher in Applied Mathematics École Normale Supérieure Paris-Saclay

Jul 2020 - Jul 2021

Main projects (associated company): Denoising algorithms for videos based on recurrent CNNs (Huawei); CNN cloud detectors for satellite images (Kayros).

- PyTorch
- Slurm
- Make & CMake
- Ctypes (C++ \leftrightarrow Python)
- Git
- Docker
- Unix Admin
- QGIS

PhD Researcher in Applied Mathematics École Normale Supérieure Paris-Saclay

Oct 2016 - Jul 2020

Main projects: Affine invariant image comparison; Fundamental and homography matrix estimation; Detection of repeated objects.

- C++
- Make & CMake
- OpenCV
- TensorFlow
- Keras
- Ctypes (C++ \leftrightarrow Python)
- Matlab
- MEX (C++ \leftrightarrow Matlab)
- Git
- Unix Admin
- Latex
- TikZ

ACADEMIC AWARDS

Laureate of a FMJH Doctoral Program (Three-year fellowship)
Fondation Mathématique Jacques Hadamard (FMJH)

2016

Laureate of a PGSM Masters Scholarship (Two-year scholarship)
Paris Graduate School of Mathematics (PGSM)

2014

Top student in the Faculty of Mathematics and Computer Science
Awarded by the vice-chancellor of the University of Havana

2011

PUBLICATIONS

Video joint denoising and demosaicing with recurrent CNNs
Winter Conference on Applications of Computer Vision (WACV), 2023

Conference

Multi-annotation attention model for video summarization
Computer Vision and Pattern Recognition (CVPR) Workshop, 2023

Conference

Robust estimation of local affine maps and its applications to image matching
Winter Conference on Applications of Computer Vision (WACV), 2020

Conference

The complete list at: <https://rdguez-mariano.github.io/publications>

TEACHING

Fourier and Hilbert Analysis (Practical Lessons)
Mathematics Department, École Normale Supérieure Paris-Saclay

2017 - 2019

Differential Calculus (Practical Lessons)
Mathematics Department, École Normale Supérieure Paris-Saclay

2016 - 2017

PDE; Complex Analysis; Mathematics I, II & III (Lectures & Practical Lessons)
Mathematics Department, University of Havana

2011 - 2014