

Killian Barrere

Computer Science
PhD

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Education

- 2017 - 2020 **Computer Science Master Degree**, *École Normale Supérieure of Rennes, Rennes University*, Rennes, France.
Deep Learning for Vision, Computer Vision, Machine Learning, Parallel Programming (Open MP, MPI, GPU, CUDA), Representation Edition and Perception of images, Bioinformatics, Virtual Reality, Vocal Acoustic and Interactions, Man-machine Interactions and Gesture Recognition, Distributed Systems, Cloud Computing, Big Data, Data Analysis and Modeling, Data Knowledge and Management, Computer Graphics, Operating Systems, Advanced Databases, Analysis and Formal Conception, Compilation, Game Theory, Research papers writing, English
- 2016 - 2017 **Computer Science Bachelor**, *École Normale Supérieure of Rennes, Rennes 1 University*, Rennes, France.
Machine Learning, Algorithmic, Programming, Computer's architecture and Systems, Statistics, Networks, Computer's Security, Cryptography, Optimisation, Formal languages and computability, Research papers writing, English
- 2016 **Admitted on a competitive basis at the École Normale Supérieure of Rennes.**
Computer Science Department
- 2014 - 2016 **Classes Préparatoires aux Grandes Écoles in MPSI then MP section**, *Centre International de Valbonne*, Valbonne, France.
Computer Science, Mathematics, Physics, Chemistry, Engineering, English, Philosophy

Work experience

- October 2020 - **Teaching Mission**, *INSA de Rennes*, Rennes, France.
- September 2023 INFO1 : Introduction to Computer Science and programmation with Java. (64h)
- October 2020 - **Computer Science PhD**, *INSA de Rennes, Université de Rennes, IRISA*, Rennes, France.
September 2023
Thesis in the IntuiDoc research group, supervised by Yann Soullard, Aurélie Lemaitre and Bertrand Coüasnon.
Deep neural networks and attention mechanisms for handwritten text recognition.
- March 2021 **Review of a paper**, *ICDAR 2021*, Lausanne, Switzerland.
Review of a research paper Submitted to the ICDAR 2021, with Aurélie Lemaitre.
- February 2020 - **Master second year internship**, *Rennes University, IRISA*, Rennes, France.
July 2020
Internship in the IntuiDoc research group, supervised by Yann Soullard, Aurélie Lemaitre and Bertrand Coüasnon.
Deep neural networks and attention mechanisms for handwritten text recognition.

- February 2019 - **Prélab Internship**, *Universitat Politècnica de València, PRHLT*, Valencia, Spain.
 July 2019 Internship in the PRHLT research group, supervised by Alejandro Héctor Toselli et Enrique Vidal.
 Keyword Spotting in historical documents.
 Segmentation-free Keyword Spotting, Image Processing, Python.
 A research paper published, and a poster presented at the IBPRIA 2019 conference, Madrid, Spain.
- September 2018 - **Prélab internship**, *Rennes University, IRISA*, Rennes, France.
 December 2018 Internship in the IntuiDoc research group, supervised by Aurélie Lemaitre and Bertrand Coüasnon.
 Implementation of Handwritten Text Recognition models.
 Handwritten Text Recognition, Deep Learning, CNN, RNN, LSTM, CTC, PyTorch.
- June 2018 - **Master first year internship**, *University of Fribourg*, Fribourg, Switzerland.
 August 2018 Internship in the DIVA research group, supervised by Manuel Bouillon, Marcus Liwicki and Rolf Ingold.
 We reused Sketch Generation to try to Generate Music, under the European Project: iMuSciCA (report available on my web page).
 Sketch Generation, Music Generation, Deep Learning, Autoencoder, RNN, LSTM, GMM, PyTorch
- September 2017 - **Master first year project**, *École Normale Supérieure of Rennes, Rennes University, CNRS, IRISA*, Rennes, France.
 May 2018 Training to write research papers, a review of the state of the art and a paper to summarize the results (both available on my web page).
 Project in a group of two students, supervised by Bertrand Coüasnon (IntuiDoc)
 Offline Handwritten Recognition : Influence of the Baseline information
 Handwritten Text Recognition, Deep Learning, Baseline, CNN, RNN, LSTM, HMM, CTC, LM
- May 2017 - **Bachelor's Internship**, *INRIA Sophia Antipolis Méditerranée*, Sophia Antipolis, France.
 July 2017 Internship in the STARS research group, supervised by Michal Koperski and François Bremond
 Activity Recognition, Deep Learning, CNN, Skeleton Detection, Work with Toyota, Caffe

Languages

- French **Mother tongue**
 English **Fluent**
 Spanish **Academic**

Computer Science's skills

- Programming Python, C, C++, Java, Scala, Caml, Lisp
 DeepLearning PyTorch
 Other L^AT_EX

Other Interests

- Karate (1st Dan)
- Architecture
- Video Games