# CYPRIEN RUFFINO

### **PhD Student in Machine Learning**

### **EDUCATION**

### Currenly enrolled in: PhD in Machine Learning

### Master's Degree in Software Engineering

#### Bachelor's Degree in Computer Science

### **EMPLOYMENT**

# PhD thesis: Deep Generative Modeling for Structured Data Generation

Laboratoire d'Informatique, de Traitement de l'Information et du Signal (LITIS, INSA de Rouen)

- Conditioned data generation with Generative Adversarial Networks
- Multi-obective training of Generative Adversarial Nets
- Integration of domain-specific constraints
- Applications to scientific data, most notably geostatistical data

### Research Internship: Machine Learning Research Intern Laboratoire d'Informatique, de Traitement de l'Information et du

Signal (LITIS, Normandie University)

- Supervisor: Pr. T. Paquet
- Deep Learning for offline handwritten text recognition on Android devices with Convolutional LSTMs
- Development of a prototype recognition system with TensorFlow and TensorFlow Lite for Android
- Industrial partnership with Hamelin SAS for the Oxford brand

### Internship: Research assistant

Laboratoire d'Informatique Fondamentale d'Orléans (University of Orléans)

April-June 2015

Supervisor: Pr. N. Ollinger

 Development of a cross-platform application for the visualisation of the SMART (Small Minimal Aperiodic Reversible Turing machine) machine for researchers, with OpenFL

# **FEATURED PUBLICATIONS**

- 1. Pixel-wise Conditioned Generative Adversarial Networks for Image Synthesis and Completion, **Cyprien Ruffino**, Romain Hérault, Eric Laloy, Gilles Gasso *In Neurocomputing*, 2020
- 2. Gradient-based deterministic inversion of geophysical data with generative adversarial networks: Is it feasible? Eric Laloy, Niklas Linde, **Cyprien Ruffino**, Romain Hérault, Gilles Gasso, Diedrik Jacques *In Computers and Geosciences*, 2019

# **SKILLS**

English European Level C2
French Native speaker

Python

Java C/C++

Keras

C/C++
TensorFlow

Linux Git SLURM Jupyter

JetBrains IDEs SQL Scikit-learn

SciPy Matplotlib Android SDK

# **SOME PROJECTS**

#### CTCModel

Easy-to-use Connectionnist Temporal Classification in Keras

### PyChip8

A scriptable CHIP-8 emulator written in pure Python

# **TEACHINGS**

#### Introduction to programming

**2018-2020** 

**♀** INSA de Rouen

Introduction to algorithmics and programming in Pascal

### Applied statistics for data science

**2018-2020** 

**♀** INSA de Rouen

Statistics, data analysis and visualisation, regressions, dimensionality reduction and testing, with SciPy/Matplotlib.

## AND ALSO...

- PhD students representative, voting member of the LITIS lab council, 2018–2020
- President of the IT student's association, 2015–2016
- Sysadmin of several of the LITIS GPU computation servers
- ArchLinux/Manjaro, PinePhone
- Bass player, hobbyist lockpicker, Esperanto speaker