

# Hadrien Bertrand

Montréal – Canada

✉ bertrand.hadrien@gmail.com • in hadrienbertrand • hbertrand

## Experience

### Mila

*Applied Research Scientist*

**Montréal**

*February 2019 – Current*

Work on machine learning projects with Mila partners, notably Hydro-Quebec. Advising startups in the context of the canadian industrial research assistance program. Research in medical imaging.

### Philips Research Medisys

**Paris**

*PhD*

*November 2015 – December 2018*

Thesis on deep learning and transfer learning applied to medical imaging problems, such as the classification of field-of-view in MR images or the segmentation of the kidney in 3D ultrasound images.

### Institut de Neurosciences de la Timone

**Marseille**

*Internship*

*February 2015 – July 2015*

Validation of a Multi-Voxel Pattern Analysis method which uses a graph-based classification method. It extracts graphs from fMRI data, which are then classified by a SVM using a specialised kernel.

### Ingenico, R&D department

**Valence**

*Industrial Project*

*January 2014 – June 2014*

Analysis of modern static code analysis methods to evaluate the faisability of automatic rules compliance on payment terminal applications, then development of such a prototype.

### Kizeo

**Avignon**

*Internship*

*June 2012 – August 2012*

It is a small company who develops B2B software for smartphones and notably a CRM solution. I worked on a custom-made Android application which allows the user to browse through the catalogue of the client company.

### Veolia Transport Valence

**Valence**

*Freelance*

*November 2011 – Mars 2012*

This company runs the bus network in Valence and is a subsidiary of Veolia. I developed an application on Android which allows the users to access the bus network map and bus schedule easily.

## Education

### Université Paris-Saclay - Télécom ParisTech - LTCI

**Paris**

*PhD*

*2015–2019*

Deep Transfer Learning for Multi-Modality and Multi-Task Anatomical Awareness

### KTH Royal Institute of Technology

**Stockholm**

*Exchange Student (ERASMUS)*

*2014–2015*

Specialisation in AI and machine learning.

### Grenoble INP ESISAR

**Valence**

*Master's degree*

*2010–2015*

Specialisation in computer science and networks.

### Lycée Saint-Joseph

**Avignon**

*High School Diploma*

*2007–2010*

Specialisation in mathematics.

## Languages

**French:** Mother tongue

**English:** Fluent

*TOEIC score: 990/990 - Level C1*

## Computer skills

**Programming languages:** C, Java, Python

**AI and Machine Learning:** deep learning, transfer learning, bayesian optimisation,

classification, clustering, semantic segmentation, graphical models

**Misc.:** Android, Unix, SQL, Matlab, LaTeX, Git, web development

## Publications

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- **(2020)** M. Hashir, **H. Bertrand**, J. P. Cohen - Quantifying the Value of Lateral Views in Deep Learning for Chest X-rays. *Under peer-review.*
- **(2020)** J. P. Cohen, M. Hashir, R. Brooks, **H. Bertrand** - On the limits of cross-domain generalization in automated X-ray prediction. *Under peer-review.*
- **(2019)** **H. Bertrand**, M. Hashir, J. P. Cohen - Do Lateral Views Help Automated Chest X-ray Predictions? *Published at MIDL 2019.*
- **(2019)** **H. Bertrand** - Hyper-parameter optimization in deep learning and transfer learning: applications to medical imaging. *PhD thesis.*
- **(2017)** **H. Bertrand**, R. Ardon, M. Perrot, I. Bloch - Hyperparameter Optimization of Deep Neural Networks: Combining Hyperband with Bayesian Model Selection. *Published at CAp 2017.*
- **(2017)** **H. Bertrand**, M. Perrot, R. Ardon, I. Bloch - Classification of MRI data using deep learning and Gaussian process-based model selection. *Published at ISBI 2017.*