# Mehdi Bahri *PhD Student in Machine Learning*

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## Education

### Imperial College London — LONDON, UNITED KINGDOM

**PhD. Machine Learning** — *2017 – (2021)*

Bayesian non-parametrics, geometry, and deep learning with applications to Computer Vision.
*Full scholarship* from the Department of Computing. *Supervisor: Dr Stefanos Zafeiriou.*

**MSc. Advanced Computing - *Distinction (84%)*** — *2015 – 2016*

Focus on statistical machine learning.
*Awarded the **Winton Capital Computing MSc Project Prize** for best thesis in Computer Science (1/188 students).*

### Grenoble INP - Ensimag — GRENOBLE, FRANCE

**BSc. and MSc. Applied Mathematics and Computer Science - *with High Honours*** — *2010 – 2016*

Focus on statistics, numerical optimization, numerical analysis, databases, software engineering.
*2010 - 2013: Classes Préparatoires aux Grandes Écoles PC\* - Lycée Chateaubriand, Rennes, France.*

## Professional Experience and Selected Projects

### JPMorgan Chase - Quantitative Associate Intern (Incoming) — LONDON, UNITED KINGDOM

**Systematic Trading LQR** — *06/18 - 09/18*

Quantitative Research Off-Cycle Internship in Machine Learning.
Systematic Trading LQR provides and executes quantitative trading strategies for clients.

### Speechmatics (Cantab Research Ltd.) - Speech Recognition Intern — CAMBRIDGE, UNITED KINGDOM

**Research & Development** — *04/17 - 07/17*

Improving the RNN language models by implementing research papers in TensorFlow and C++.
Divided model size by 4 while keeping the same cross-entropy loss / perplexity and WER.

### HarperCollins Publishers - Data Scientist — LONDON, UNITED KINGDOM

**Global Pricing and Analytics** — *09/16 - 03/17*

Graph mining and influence maximization to maximize uplift of books on special offers.
Analyzed MongoDB databases of more than 100Gb with scikit-learn and networkx.

### Imperial College - Master's Thesis — LONDON, UNITED KINGDOM

**Robust Low-Rank Modeling on Tensors: New Algorithms and Extensive Comparisons** — *04/16 - 09/16*

Devised 4 ADMM solvers and a Variational Bayes algorithm for robust tensor factorizations (extensions of matrix factorizations) in MATLAB. Compared against 11 state-of-the-art methods on computer vision benchmarks, analyzed 500Gb of experimental data, and showed improvements of up to 16% higher PSNR and FSIM. Published in top venue. *Supervisors: Dr Stefanos Zafeiriou & Dr Yannis Panagakis.*

## Publications

- **M. Bahri**, Y. Panagakis, and S. Zafeiriou, "Robust Kronecker-Decomposable Component Analysis for Low Rank Modeling" in International Conference on Computer Vision (ICCV) 2017

- N. Xue, G. Papamakarios, **M. Bahri**, Y. Panagakis, and S. Zafeiriou, "Robust Low-rank Tensor Modelling Using Tucker and CP Decomposition" in European Signal Processing Conference (EUSIPCO) 2017

## Skills

| Computing skills | | Languages | |
|---|---|---|---|
| Programming *(advanced)* | Python, Java, C, Shell | French | *Native* |
| Programming *(intermediate)* | SQL, Javascript, Prolog, C++ | English | *Fluent* |
| Modeling | MATLAB, R, NumPy/SciPy, TensorFlow, Scikit-learn | Spanish | *Intermediate* |
| Tools | Git, LaTeX, MongoDB | | |

## Interests

Fitness, Nutrition • Elected Student Representative, *Ensimag* • Morgan Stanley Campus Ambassador, *Ensimag*
REFERENCES AVAILABLE UPON REQUEST.