

# Tamim El Ahmad

PhD · Machine Learning

tamim-el.github.io

(+44) 7823931228

Edinburgh, United Kingdom

elahmad.tamim@gmail.com

github.com/tamim-el

## Research Experience

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### UNIVERSITY OF EDINBURGH

*Postdoctoral researcher (Sup. A. Teckentrup)*

- RESEARCH TOPICS: Gaussian Processes, Partial Differential Equations

Jan. 2025 – Present

*Edinburgh, United Kingdom*

### TÉLÉCOM PARIS

*PhD in Machine Learning (Sup. F. d'Alché-Buc, P. Laforgue)*

- TITLE: Learning Deep Kernel Networks: Application to Efficient and Robust Structured Prediction
- RESEARCH TOPICS: Kernel Methods, Random Projections, Structured Prediction, Neural Networks

Jan. 2021 – Jul. 2024

*Paris, France*

## Other Experience

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### TÉLÉCOM PARIS

*Research Engineer in a joint project with Valéo*

- Research and development for unsupervised anomaly detection (One-Class SVM, Isolation Forest, Data Depth)
- Development of an unsupervised anomaly detection library (Python)

Oct. 2020 – Jan. 2021

*Paris, France*

### TÉLÉCOM PARIS

*Research Intern*

- Research and development for structured prediction: hybrid architecture based on kernel methods and neural networks (PyTorch)

May 2020 – Sep. 2020

*Paris, France*

### MÉDICIS

*Computer Science Intern*

- Development of a NoSQL data entry server (MongoDB)

Jun. 2019 – Aug. 2019

*Paris, France*

### SANOFI

*Computer Science Intern*

- Research and development of a deep learning model for automatic recognition of IC-50 curves (Keras, Knime)

Jun. 2018 – Aug. 2018

*Paris, France*

## Education

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### ÉCOLE NORMALE SUPÉRIEURE PARIS-SACLAY

*Master's degree MVA - Machine Learning and Computer Vision*

Sep. 2019 – Sep. 2020

*Paris, France*

### ÉCOLE DES MINES DE SAINT-ÉTIENNE

*Engineering Degree - Computer and Data Science*

Sep. 2016 – Sep. 2020

*Saint-Étienne, France*

### UNIVERSITÉ PARIS-DIDEROT

*Academic gap year in Master 1 - Applied Mathematics*

Sep. 2018 – Sep. 2019

*Paris, France*

**UNIVERSIDAD DE BUENOS AIRES**  
*Exchange Program - Computer and Data Science*

Aug. 2017 – Dec. 2017  
*Buenos Aires, Argentina*

**UNIVERSITÉ JEAN MONNET**  
*Bachelor's degree - Mathematics*

Sep. 2016 – Sep. 2017  
*Saint-Étienne, France*

### *Academic Duties*

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#### **Teaching Assistant**

Jan. 2021 – Present

*Télécom Paris*

- Tutorials: Statistics, Convex Optimisation
- Practical Sessions: Statistics, Convex Optimisation, Kernel Methods, Introduction to Machine Learning, Structured Prediction

*University of Edinburgh*

- Lectures: Engineering Mathematics
- Tutorials: Applied Dynamical Systems

#### **Reviewer**

Jun. 2022 – Present

*AISTATS, ICML, JMLR, TPAMI, TMLR*

#### **Talks**

May 2023 – Present

*Alan Turing Institute, DataSig team (Online, May 23)*

*Conférence sur l'Apprentissage automatique (Strasbourg, Jul. 23)*

*Journées de Statistique (Bordeaux, May 24)*

*Conférence sur l'Apprentissage automatique (Lille, Jul. 24)*

*KAIST AI, OSI Lab (Seoul, Jul. 24)*

*Yonsei University (Seoul, Jul. 24)*

*ECML PKDD (Vilnius, Sep. 24)*

*Prob\_AI Hub seminar (Online, Jan. 25)*

*Numerical Mathematics and Data Science seminar (Edinburgh, Jan. 25)*

*the Biennial Numerical Analysis Conference (Glasgow, Jun. 25)*

*Uncertainty Quantification in the North East (Newcastle, Feb. 26)*

### *Publications*

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**Deep Sketched Output Kernel Regression for Structured Prediction (ECML PKDD 2024).**

T. El Ahmad\*, J. Yang\*, P. Laforgue, F. d'Alché-Buc.

**Sketch In, Sketch Out: Accelerating both Learning and Inference for Structured Prediction with Kernels (AISTATS 2024).**

T. El Ahmad, L. Brogat-Motte, P. Laforgue, F. d'Alché-Buc.

**Fast Kernel Methods for Generic Lipschitz Losses via  $p$ -Sparsified Sketches (TMLR 2023).**

T. El Ahmad, P. Laforgue, F. d'Alché-Buc.

### *Other Interests*

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**Musical education and Guitar:** 10 years, National school of music Marcel Dadi in Créteil

**Sport:** Fencing (8 years of practice), Football, Swimming