

**Tamim El Ahmad**  
PhD Student · Machine Learning  
tamim-el.github.io

(+33) 631161262  
Créteil, France

elahmad.tamim@gmail.com  
github.com/tamim-el

## Education

<b>TÉLÉCOM PARIS</b> <i>PhD in Machine Learning (Sup. F. d'Alché-Buc, P. Laforgue)</i> <ul style="list-style-type: none"><li>• TITLE: Learning Deep Kernel Networks: Application to Efficient and Robust Structured Prediction</li><li>• RESEARCH TOPICS: Kernel Methods, Random Projections, Structured Prediction, Neural Networks</li></ul>	Jan. 2021 – Present <i>Paris, France</i>
<b>ÉCOLE NORMALE SUPÉRIEURE PARIS-SACLAY</b> <i>Master's degree MVA - Machine Learning and Computer Vision</i>	Sep. 2019 – Sep. 2020 <i>Paris, France</i>
<b>ÉCOLE DES MINES DE SAINT-ÉTIENNE</b> <i>Engineering Degree - Computer and Data Science</i>	Sep. 2016 – Sep. 2020 <i>Saint-Étienne, France</i>
<b>UNIVERSITÉ PARIS-DIDEROT</b> <i>Academic gap year in Master 1 - Applied Mathematics</i>	Sep. 2018 – Sep. 2019 <i>Paris, France</i>
<b>UNIVERSIDAD DE BUENOS AIRES</b> <i>Exchange Program - Computer and Data Science</i>	Aug. 2017 – Dec. 2017 <i>Buenos Aires, Argentina</i>
<b>UNIVERSITÉ JEAN MONNET</b> <i>Bachelor's degree - Mathematics</i>	Sep. 2016 – Sep. 2017 <i>Saint-Étienne, France</i>

## Experience

<b>TÉLÉCOM PARIS</b> <i>Research Engineer in a joint project with Valéo</i> <ul style="list-style-type: none"><li>• Research and development for unsupervised anomaly detection (One-Class SVM, Isolation Forest, Data Depth)</li><li>• Development of an unsupervised anomaly detection library (Python)</li></ul>	Oct. 2020 – Jan. 2020 <i>Paris, France</i>
<b>TÉLÉCOM PARIS</b> <i>Research Intern</i> <ul style="list-style-type: none"><li>• Research and development for structured prediction: hybrid architecture based on kernel methods and neural networks (PyTorch)</li></ul>	May 2020 – Sep. 2020 <i>Paris, France</i>
<b>MÉDICIS</b> <i>Computer Science Intern</i> <ul style="list-style-type: none"><li>• Development of a NoSQL data entry server (MongoDB)</li></ul>	Jun. 2019 – Aug. 2019 <i>Paris, France</i>
<b>SANOFI</b> <i>Computer Science Intern</i> <ul style="list-style-type: none"><li>• Research and development of a deep learning model for automatic recognition of IC-50 curves (Keras, Knime)</li></ul>	Jun. 2018 – Aug. 2018 <i>Paris, France</i>

## *Academic Duties*

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### **Teaching Assistant**

Jan. 2021 – Present

*Télécom Paris*

*Paris, France*

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

### **Reviewer**

Jun. 2022 – Present

*AISTATS, JMLR, TPAMI*

### **Talks**

Sep. 2022 – Present

*Alan Turing Institute, DataSig team (Online, May 23), C4p (Strasbourg, Jul. 23), JdS (Bordeaux, May 24)*

## *Publications*

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**Deep Sketched Output Kernel Regression for Structured Prediction (Preprint).**

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