




# KARIM TIT

French, 27 years old, 📍 Inria Rennes, France

Ph.D. candidate in Machine Learning, defense expected in March 2024

✉ karim.tit@inria.fr —  karim-tit —  karimtito —  karimtito.github.io

## WORK EXPERIENCE 🏢

---

### Thales Land and Air Systems

February 2021 - January 2024

ML Research Engineer, supervised by Dr. Louis-Marie Traonouez

We are working on the reliability of Deep Neural Networks for cyber-security applications.

### KeyQuant

May 2020 - September 2020

Quantitative research intern, supervised by Dr. Charles Chevalier

Enhanced and implemented [in Python] trend-following trading strategies with machine learning models.

### CREST, CNRS

July 2019 - September 2019

Research intern, supervised by Dr. Anna Simoni

Implemented [in R] and analyzed a new estimator for inverse problems in high dimensional econometrics.

### Capital Fund Management & École Polytechnique

March 2019 - July 2019

Quantitative research intern, supervised by Dr. Michael Benzaquen & Dr. Iacopo Mastromatteo

Developed a financial market microstructure model for the Chair Econophysics and Complex Systems

### ScreenSeed

October 2018 - March 2019

R&D project (part-time), supervised by Dr. Edwin Grappin (CTO)

Computer vision team project (seeds growth prediction) with machine learning methods for a biotech startup.

## EDUCATION 🎓

---

### INRIA & University of Rennes

February 2021- January 2024

Ph.D. in Computer Science, supervised by Dr. Teddy Furon & Dr. Mathias Rousset

Thesis subject : "Reliability of Deep Neural Networks with Rare Event Simulation Algorithms."

### Paris-Saclay University

2019-2020

Masters in Mathematics of Randomness (M2), StatML track

highest distinction, GPA 4.0

Some relevant courses : Reinforcement Learning, Statistical Learning

### ENSAE Paris, Polytechnic Institute Of Paris

2018-2020

Master of Engineering in Data Science (Diplôme d'ingénieur)

highest distinction, GPA 4.0

Some relevant courses : Deep Learning, Natural Language Processing, C++

### Paris Sciences Et Lettres University

2018-2019

Research Masters in Pure and Applied Mathematics (M2)

highest distinction , GPA 4.0

Some relevant courses : Stochastic Calculus, Stochastic Control

### Sorbonne University

2016-2018

B.Sc. in Mathematics with minor in Physics (L3),

highest distinction, GPA 4.0

### Lycée Pierre Corneille

2014- 2016

Preparatory classes for french Grandes écoles, Mathematics and Physics

with honours, Grade A

## LANGUAGE & TECHNICAL SKILLS ✂

---

French	Mother tongue
English	C1 level (TOEFL : 104/120)
German	B1 level
Programming languages	☞ (main), R, C++ (secondary)
Python libraries	Numpy, Pandas, PyTorch, TensorFlow, Scikit-learn
Operating systems	🐧, 🖥
Software tools	git, 🖱, L <sup>A</sup> T <sub>E</sub> X

## PUBLICATIONS 📖

---

### Three Bricks to Consolidate Watermarks for Large Language Models. - WIFS 2023

P. Fernandez, A. Chaffin, K.T., V. Chappelier, T. Furon- IEEE 15th International Workshop on Information Forensics and Security, Dec 2023, Nuremberg, Germany.

### Gradient-Informed Neural Network Statistical Robustness Estimation. - AISTATS 2023

K.T., T. Furon, M.Rousset. - 26th International Conference on Artificial Intelligence and Statistics (AISTATS), Apr 2023, Valencia, Spain.

### Efficient Statistical Assessment of Neural Network Corruption Robustness. - NeurIPS 2021

K.T., T. Furon, M.Rousset. - 35th Conference on Neural Information Processing Systems, Dec 2021, Sydney (virtual), Australia.

### Évaluation statistique efficace de la robustesse de classifieurs. - CAID 2021 (In French)

K.T., T. Furon, M.Rousset, L.-M. Traonouez. - Conference on Artificial Intelligence for Defense, DGA, DGNUM, Ministère des Armées, Nov 2021, Rennes, France.

## TEACHING 🧑🏫

---

### École Polytechnique

October 2019- January 2020

Tutorials for undergrad students covering advanced statistics and measure theory (45h in total).

## ACADEMIC AWARDS 🏆

---

Scholarship for academic excellence, 'Sophie Germain'

2019-2020

Masters Scholarship awarded by the Fondation Mathématiques Jacques Hadamard (FMJH)

Scholarship for academic excellence, 'PGSM'

2018-2019

Masters Scholarship awarded by the Paris Graduate School of Mathematics

## NON-ACADEMIC INTERESTS 🎸

---

Music : Guitar & Piano

Sports : Calisthenics & Running

Travelling : Armenia-Belgium-England-Germany-Georgia-Morocco-Portugal-Tunisia-Turkey-Spain