Achille **Salaün**

PhD in Computational Mathematics

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Oxford, United Kingdom

Bridging the gap between developers and consultants, I currently develop tailored software solutions to transform complex corporate data into accessible knowledge graphs, underlying interactive visual maps. I especially enjoy working on applied machine learning problems, collaborating with multi-disciplinary experts to solve real-world applications.

Expertise and interest

Machine learning (ML) • Interpretability • Knowledge graphs

Skills

Python

TensorFlow, PyTorch, scikit-Learn

RDF, SPARQL

HTML, CSS, JavaScript, D3, Aria

Languages

French

English

*Scales are from 0 (Awareness) to 1 (Expert).

Education

2017-2021 PhD in Computational Mathematics — Institut Polytechnique de Paris
Alarm prediction in networks via space-time pattern matching and machine learning

2014-2017 Graduate Engineer (*Diplôme d'ingénieur*) - Master's degree
Télécom Paris

2015-2017 Télécom Paris' Master specialisation in Data Science and Engineering
EURECOM

2011-2014 Classe Préparatoire aux Grandes Écoles (MPSI/MP) — Lycée du Parc
French cram school focusing on Maths and Physics

Experience

2024-Now Technical Consultant — Visual Meaning (VM)

Responsibilities:

- *Streamline and automatise data processing.*
- *Develop new technical capabilities with the delivery of prototypes and proofs of concept.*
- *Support consultants and clients on technical conversations about data storage, processing, analysis.*

Deliverables:

- *A utility tool to update map content: execution time has been reduced by 75%, with no remaining bottleneck.*
- *Modernisation of VM's ETL: built as a functional graph, the new process is flexible, transparent, with eased troubleshooting.*
- *Interactive D3 graph visualisations: a new capability within VM and a 3-month record integration time, from first pitch to multi-steps client's validation.*

2022-2024 Postdoctoral Researcher — University of Oxford

Responsibility: *in collaboration with surgeons, support the decision of accepting or not a kidney transplant with interpretable ML.*

Deliverable: *a Python prototype of an interpretable clinical decision support system for kidney transplantation.*

2017-2021 PhD in Computational Mathematics — Télécom SudParis, Nokia Bell Labs

Responsibility: *develop pattern matching and ML solutions for alarm prediction or root cause analysis in telecommunication networks.*

Deliverables:

- *a Python root cause-analysis module, which has been transferred to Nokia's business units.*
- *a theoretical cartography of HMM and RNN's expressivities.*

2018-2020 Lab Supervisor — Télécom SudParis
Mentoring students on: Image Segmentation with Hidden Markov Models (Master 2) and Scientific Calculus (Master 1)

Selected scientific publications

2024 Interpretable Machine Learning in Kidney Offering: Multiple Outcome Prediction for Accepted Offers. — Scientifc Reports
Salaün A., Knight S., Wingfield L. R., Zhu T.

2019 Comparing the modeling powers of RNN and HMM — ICMLA
Achille Salaün, Yohan Petetin, François Desbouvries

2019 Space-time pattern extraction in alarm logs for network diagnosis — MLN
Achille Salaün, Anne Bouillard, Marc-Olivier Buob

2018 Log analysis via space-time pattern matching — CNSM
Anne Bouillard, Marc-Olivier Buob, Maxime Raynal, Achille Salaün