

ANTOINE DESJARDINS

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Currently applying for a VISA related to the position of Research Technologist at the Mass General Brigham Hospital with a goal starting date in January 2023.

EXPERIENCE

08/2022 – 12/2022

SCIENTIFIC INTERN, SECURITY AND TRUST, UNIVERSITY OF LUXEMBURG

Adapting adversarial attacks and defenses from computer vision to tabular data with additional domain constraints. Research on data augmentation and robustification methods for deep learning model generalization and reliability.

04/2022 – 08/2022

SCIENTIFIC INTERN, INSTITUTE OF SCIENCE AND TECHNOLOGY AUSTRIA

Building the theoretical framework for the game theory analysis of permissionless Blockchains and enabling fast, asynchronous algorithms with synchronous safety guaranties (paper under peer-review)

Building a high-performance, asynchrony-resilient algorithm for data geo-replication across data-centers: [Mandator and Sporades paper](#) (paper under peer-review)

Scalability of Sharding: mathematical study of scaling laws under probabilistic security constraints (paper in preparation)

09/2021 – TODAY

CEO, DALEMBERT AI

Co-founder of a data brokering Start-up. Hands-on experience on data collection, cleaning and annotation, UX/UI design, pitching, Market Analysis, Scrum/Agile management

02/2021 – 08/2021

MACHINE LEARNING INTERN, SINEQUA

Creation of a NLP model for Key Phrase Extraction using BERT for a top-tier Search Engine Achieved above-State-of-the-Art performance on relevant benchmark using meta-learning techniques; developed multilingual models and studied the effect of model downscaling.

06/2020 – 12/2020

COLLABORATOR, ECOLE POLYTECHNIQUE FEDERALE DE LAUSANNE (EPFL)

Design, proof and optimization of a Leaderless Byzantine fault-tolerant Consensus algorithm for secure Blockchain applications

Publication of [Leaderless Consensus](#), Best Paper Award at ICDCS2021

04/2018 – 04/2021

CCO, CODEX

At Codex, an e-tourism start-up I co-founded, I managed the writing of creative content for escape games, marketing, communication and contracts negotiation.

01/2020 – 06/2022

EXAMINATOR, ÉDUCATION NATIONALE

Correcting written IT exams and running weekly English oral exams for 1st and 2nd year engineering students.

EDUCATION

MONTH YEAR

ENGINEERING DEGREE, ÉCOLE DES PONTS PARISTECH

Machine Learning, Statistics, Fourier Analysis, Computer Vision, Stochastic Processes, Game Theory, Object-oriented Programming, Operations Research, web development

- **Google Hashcode** Hackathon : top 100 France : score optimization through insertion sorting on a scheduling problem (2019&2020 editions)
- **Deep Compress sensing** for holographic radar in partnership with Airbus
- **KIRO** – Operations Research Hackathon organized by Renault to optimize trucks delivery routing. Use of clusterization methods
- Resolution of Traveling salesman problem with **simulated annealing**
- generation of high-constraint timetable with **genetic algorithm** (C++)
- Course attribution via **matching algorithm** : Stable Marriage, Random Dictatorship, bet system (school project, 2 months)

MONTH YEAR

MASTER OF RESEARCH, INSTITUT POLYTECHNIQUE DE PARIS - MPRO

Graph theory, Mathematical Programming, Constraint Programming, Exact and Approximate Complexity Theory, Meta-Heuristics, Scheduling, Stochastic Optimisation, Queue Theory, OR for Transports and for Sustainable Development, OR and Machine Learning, Localisation models
Graduated with GPA

MONTH YEAR

BACHELOR'S DEGREE, UNIVERSITE PARIS NANTERRE

Bachelor of Philosophy pursued concurrently with the engineering diploma. Courses include formal logic, philosophy of mind and philosophy of science. Graduated with honors.

SKILLS

- Python (Scikit-learn, TensorFlow, PyTorch, pandas, numpy, poetry)
- C++ (OOP, image vision and alteration)
- Julia (Gurobi, CPLEX, GLPK), VBA
- R, OPL, Solidity, HTML/CSS
- Git, LaTeX
- French (native)
- English (fluent)
- German (social)
- Japanese (beginner)

ACTIVITIES

Participated in two national debating competitions (in French and in English)

Founded and directed Philosophy club of Ecole des Ponts ParisTech

2016 International Chemistry Olympiades (French pre-selection), silver mention

Handimangement certificate