Marc **Desgroseilliers**

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Data scientist with a strong background in statistics and numerical computing. Keen to apply machine learning methods to real world problems

Professional Experience

Senior Machine Learning Engineer — *2020 - Present*
Inpher — *Lausanne, Switzerland*

- Design and adapt machine learning algorithms for cryptographical frameworks
- Project lead for privacy preserving xgboost implementation
- Analyze and validate numerical precision of multiple parties algorithms
- Design and implement a user facing system for private dataframes

Tree-based learning | Recommender systems | Data Independent Algorithms | Cryptography

Data Scientist — *2018 - 2020*
UPC — *Zurich, Switzerland*

- Fault detection in the internet distribution network (hybrid fiber coaxial)
- Manage and promote the CPD detection project, from exploratory data analysis to machine learning algorithm selection to deployment
- Increase positive hit rate from 10% to above 85%
- Generate visualizations and reports to help business partners and engineers better understand network status

Time series | Feature engineering

Technical Support — *2015-2018*
Pix4D — *Lausanne, Switzerland*

- Created a training program: workshops, educational videos, online material
- Troubleshoot user issues, specialization in precision agriculture and multispectral imagery
- Managed the elaboration of an online certification program
- Liaised between technical and non technical teams

Online learning | Precision Agriculture

Education

Doctorate in Information Theory — *2010 - 2015*
Ecole Polytechnique Federale de Lausanne EPFL — *Switzerland*

- Thesis: Reducing Randomness in Matrix Models for Wireless Communication
- Course: Signal Processing | Machine learning | Graphical Models

Erasmus Mundus Masters: Algebra, Geometry and Number Theory — *2008 - 2010*
University Paris-Sud XI — *France*

- Thesis: On some convex cocompact groups in real hyperbolic space
- Course: Geometric Group Theory | Number Theory | Differential Geometry |

Publications

Desgroseilliers, M. (2015). *Reducing randomness in matrix models for wireless communication*. EPFL.

Kevin Deforth, N. G. M. G. D. J. M. V., Marc Desgroseilliers. (2022). Xorboost: tree boosting in the multiparty computation setting [Paper presentation]. In *Proceedings on privacy enhancing technologies* (Vol. 4).

Skills

Languages English – Native | French –Native | Italian – C1
Tech Stack Scala | Python | PyData
Personal Interests Mountaineering | Cycling