

# Julie Keisler

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## Experience

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### Starting research position

June 2025 - now

INRIA Paris - EDF R&D

- Generative artificial intelligence for statistical climate downscaling.
- Joint work with Pr. Claire Monteleoni, Anastase Charantonis, Yannig Goude and Boutheina Oueslati.

### PhD in Computer Science

Feb 2022 – Feb 2025

EDF R&D - University of Lille - INRIA Paris

- Automated Deep Learning: algorithms and software for energy sustainability.
- Supervised by Pr. Claire Monteleoni, Pr. El-Ghazali Talbi and Margaux Brégère.

### Teaching Assistant

Gif-sur-Yvette, since 2024

Faculté des Sciences d'Orsay - Université Paris Saclay

- Practical Work: Introduction to Deep Learning, for the MS Mathematics and AI.

### Data Scientist Intern - 6 months

Rueil-Malmaison, 2021

Sagemcom

- Data Analysis and load forecasting for a rural electrification project in Madagascar.
- Development of microservices for customers (Docker, Jenkins, Spark technologies).

## Awards

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### INREC 2024 conference, best paper award

Sept 2024, Essen

Automated Spatio-Temporal Weather Modeling for Load Forecasting. [🔗](#), with Margaux Brégère

### Flood Map Prediction challenge, winning team.

Jan - April 2024, Paris

- Prediction of flood risk maps without streamflow data.
- Winning proposition with a CNN-based solution, team work with Eva Gironse.
- Workshop paper at ICLR 2025 Workshop: Tackling Climate Change with Machine Learning. [🔗](#)

## Education

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### Télécom Paris

Sept 2018 – Sept 2021

Engineer Degree (MS in Computer Science)

- Major in signal processing for AI, minor in computer graphics and interactive systems.

### ETH Zürich

Sept 2020 – Feb 2021

Exchange student

- Semester Thesis in the Power System Laboratory: Benchmark electric power consumption forecasting algorithms, supervised by Yi Wang.
- **Coursework:** Power Market - Portfolio and Risk Management, Neural Network Theory, Environmental Systems Data Science, Corporate Sustainability.

### Lycée Montaigne, Bordeaux

Sept 2016 – Sept 2018

CPGE, MPSI/MP\*

- Undergraduate studies to prepare for competitive entry exams to french engineering schools (Grandes Ecoles). Subjects studied: Mathematics, Computer Science, Physics, French literature, German and English.

## Selected Publications

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An algorithmic framework for the optimization of deep neural networks architectures and hyperparameters.

June 2024

**Julie Keisler**, El-Ghazali Talbi, Sandra Claudel, Gilles Cabriel

[Journal of Machine Learning Research \(JMLR\)](#) [🔗](#)

**Automated Deep Learning for Load Forecasting.**

*Sept 2024*

**Julie Keisler**, Sandra Claudel, Gilles Cabriel, Margaux Brégère

[International Conference on Automated Machine Learning \(AutoML\)](#). [🔗](#)

**WindDragon: Automated deep learning for regional wind power forecasting.**

*March 2025*

**Julie Keisler**, Etienne Le Naour

[Environmental Data Science](#). [🔗](#)

**A Bandit Approach with Evolutionary Operators for Model Selection.**

*Aug 2024*

Margaux Brégère, **Julie Keisler**

[International Workshop on Resource-Efficient Learning for Knowledge Discovery, ACM SigKDD](#). [🔗](#)

**AutoML algorithms for online generalized additive model selection: application to electricity demand forecasting**

*Sept 2025*

Keshav Das, **Julie Keisler**, Amaury Durand, Margaux Brégère

[International Conference on Automated Machine Learning \(AutoML\)](#). [🔗](#)

**SerpentFlow: Generative Unpaired Domain Alignment via Shared-Structure Decomposition.**

*January 2026*

**Julie Keisler**, Anastase Charantonis, Boutheina Oueslati, Yannig Goude, Claire Monteleoni

[Preprint](#). [🔗](#)

## Various Research activities

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**Python package DRAGON.**

[Documentation](#) [🔗](#)

- Python package for the optimization of deep neural networks architectures and hyperparameters.

**Conference Reviewer.**

- ICANN24, CCAI workshop at NeurIPS24 and Environmental Data Science.

**MS internships supervision.**

*2024 - 2026*

- Global forecasting models for a large number of time series, EDF R&D.
- Statistical wind downscaling with AI, EDF R&D and INRIA Paris (3 internships).
- Automated selection of adaptive additive models for load forecasting, EDF R&D.
- Symbolic regression for satellite data using DRAGON, INRIA Paris.

## Selected Talks

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**ICLR 2024 Workshop on Tackling Climate Change with Machine Learning**

*Wien, May 2024*

- WindDragon: enhancing wind power forecasting with automated deep learning.

**ConfStochStatML workshop, Wolfgang Pauli Institute.**

*Wien, Sept 2023*

- Short-term load forecasting using optimized Deep Neural Networks.

## Skills

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**Programming Languages:** Python, R, C++

**Packages:** PyTorch, TensorFlow, Scikit-Learn, Numpy, Pandas, Xarray.

**Tools:** Linux, Latex, Git, Slurm on HPC, MPI, Docker.

**Languages:** French (native), English (fluent), German (intermediate).

**Others:** Football, guitar (end of musical studies certificate), volunteer for Data For Good.