

Victor Dheur

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Education

- 10/2021– **PhD student**, *University of Mons, Big Data and Machine Learning Lab*
Research on probabilistic models and uncertainty quantification in neural networks.
Current topics include calibration, conformal prediction and deep generative models.
Director: [S. Ben Taieb](#).
- 2019–2021 **Master's degree**, *University of Mons, Computer Science*
Summa Cum Laude
- 2016–2019 **Bachelor's degree**, *University of Mons, Computer Science*
Magna Cum Laude

Work Experience

- 08/2020–11/2020 **Master's internship**, *Nokia Bell Labs*
Implementation and evaluation of a signal translation model to extend the availability of deep learning solutions for detecting and diagnosing impairments on subscriber-ISP lines.
Director: [N. Dupuis](#).
- 07/2019–08/2019 **Research Intern**, *University of Mons, Theoretical Computer Science Lab*
Research on solving parity games using binary decision diagrams, in the context of model checking.
Director: [V. Bruyère](#).

Publications

- In review* [Distribution-Free Conformal Joint Prediction Regions for Neural Marked Temporal Point Processes](#)
Victor Dheur*, Tanguy Bosser*, Rafael Izbicki, Souhaib Ben Taieb
- 05/2024 [Probabilistic Calibration by Design for Neural Network Regression](#)
Victor Dheur, Souhaib Ben Taieb
AISTATS - International Conference on Artificial Intelligence and Statistics, 2024
- 07/2023 [A Large-Scale Study of Probabilistic Calibration in Neural Network Regression](#)
Victor Dheur, Souhaib Ben Taieb
ICML - International Conference on Machine Learning, 2023

Projects

- Master's thesis **Uncertainty quantification in neural networks.**
Benchmarking state-of-the-art methods for uncertainty quantification in machine/deep learning on synthetic and real-world datasets, with various metrics for predictive distributions.
Director: [S. Ben Taieb](#).

Master 1 project **Machine learning applied to routing in wireless sensor networks.**
Use of reinforcement learning to optimize packet routing. Comparison of a distributed and a centralized approach.
Directors: S. Ben Taieb., B. Quoitin.

Programming contests

2020–2022 **Google Hashcode:** **114th** (out of 9000+) in 2022, **193rd** (out of 9000+) in 2021, **283rd** (out of 10000+) in 2020.
2018–2020 **Benelux Algorithm Programming Contest (BAPC):** **2nd** (out of 77) in 2020, **8th** (out of 55) in 2019, **6th** (out of 44) in 2018.
11/2020, 03/2019 **Battle Dev:** **35th** (out of 4500+) in November 2020, **20th** (out of 4000+) in Mars 2019.

Teaching

2021-2024 **Teaching Assistant, UMONS**
2023-2024: Directed the labs of the *Machine Learning 1* course.
2022-2023: Partially in charge of the labs of the *Machine Learning 1* and *Machine Learning 2* courses.
2021-2022: Directed the labs of the *Compilation* course, assistant for the labs of the *Computer Architecture* course.
2022, 2021, 2020 **Student Assistant, UMONS**
Assistant for the labs of the *Computer Architecture* course.

Talks

24/03/2023 **Diffusion Models**, *Machine Learning II Seminars*, UMONS, Mons, Belgium
23/03/2023 **How does Artificial Intelligence Really Work?**, *Journées Math-Sciences*, UMONS, Mons, Belgium
16/03/2023 **Deep Generative Models**, *Machine Learning II Seminars*, UMONS, Mons, Belgium
20/06/2022 **Conformalized Quantile Regression**, *Big Data and Machine Learning Reading Group*, UMONS, Mons, Belgium
30/03/2022 **Regularization methods for neural network calibration**, *InforTech Day*, UMONS, Mons, Belgium
19/01/2022 **Score Matching and Langevin Dynamics**, *Big Data and Machine Learning Reading Group*, UMONS, Mons, Belgium
13/12/2021 **Uncertainty Quantification in Machine Learning**, *Big Data and Machine Learning Reading Group*, UMONS, Mons, Belgium

Languages

French Native Proficiency
English Professional Working Proficiency
Dutch Elementary Proficiency