# Barbara GENDRON

## Third-year PhD Student in Natural Language Processing (NLP) at LORIA, Nancy, France

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## 🎓 EDUCATION

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| 2023-Now<br>Nancy, France | **LORIA (Laboratoire Lorrain de Recherche en Informatique et ses Applications)**, PhD in Computer Science<br>*"Controlled Conversational Models through Conversation-Dedicated Ontology"*<br>› **Development** of an ontology representing conversational knowledge to guide the control and analysis of dialogue systems based on large language models.<br>› **Participated** in the International Semantic Web Research Summer School (ISWS) in 2024.<br>› **Teaching assistant** at École des Mines de Nancy and IUT Charlemagne : data analysis, machine/deep learning, Python programming, web interfaces. |
| 2022-2023<br>Esch-sur-Alzette,<br>Luxembourg | **University of Luxembourg**, Master of Data Science (second year) as a double diploma<br>› **Major** in Machine and Deep Learning, Computer Vision and applications to Medical Imaging, Natural Language Processing, Network analysis<br>› **Minor** in Actuarial Science and Non-parametric Statistics |
| 2020-2023<br>Nancy, France | **Mines Nancy engineering school**, Industrial Engineering and Applied Mathematics department<br>› **Major** in Data Analysis, Machine/Deep Learning, Probabilities, Partial Differential Equations, Numerical Analysis and Stochastic Methods<br>› **Minor** in Physics, Molecular Biology and Bioinformatics<br>› **Research project** in Natural Language Processing based on multilingual information retrieval, leading to the writing of a survey on multilingual language models properties. Carried out at LORIA (French Computer Science laboratory). |
| 2018-2020<br>Paris, France | **Saint-Louis 'Classe Préparatoire'.** Intensive undergraduate two-year study course preparing for competitive exams to the French *Grandes Écoles* which are top French and highly-selective institutions<br>› Linear Algebra, Advanced Calculus, Electromagnetism, Signal Processing, Algorithmic |
| July 2018<br>Chantilly, France | **Jean Rostand High School**, *Baccalauréat Scientifique section Européenne* (high school leaving diploma with a major in Mathematics and English) passed with the congratulations of the Jury (19.36/20) |

## 💼 EXPERIENCE

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| August 2023<br>March 2023 | NLP Research Intern, LORIA, Nancy, France<br>› Implementation of an end-to-end metric learning approach for emotion recognition in conversations using contextual dialogue representations.<br>› Mastering of PyTorch basics.<br>› Writing of the Master Thesis "Meta-Learning for Emotion Detection in Conversational Context".<br>`Natural Language Processing` `Deep Learning Frameworks` `Team work` |
| February 2023<br>November 2022 | Data Science research assistant, UNIV. OF LUXEMBOURG, Esch-sur-Alzette, Luxembourg<br>› Part of the Interventional Neuroscience Group of the Luxembourg Centre for Systems Biomedicine.<br>› In charge of providing support and documentation on specific data science and machine learning issues as well as medical imaging tools (ANTs, MONAI,...).<br>`Medical Imaging` `Deep Learning Frameworks` `Team work` |

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| August 2022<br>June 2022 | **Data Scientist intern, GRTGAZ, Bois-Colombes, France**<br>❯ Part of the IT Direction of a French company specialised in high-pressure gas transportation.<br>❯ Pre-processing technical data from gas infrastructures and development of a regression model for predictive maintenance.<br>❯ Learning and mastering of Dataiku DSS plateform for data preparation and analysis.<br>[Communication skills] [Practical Data Science Techniques] [Team work] |
| May 2021<br>November 2020 | **Science communicator, LA MAIN À LA PÂTE, Paul Lévy primary school in Saint-Max, France**<br>❯ Preparing and leading twelve afternoons of scientific workshops around the concept of motion<br>❯ Implementing a group project for the pupils, guiding experiments leading to the building of a small vehicle<br>[Teaching skills] [Workshops conception] [Communication skills] |

## 📖 PUBLICATIONS

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| June 2025 | Barbara Gendron, Gaël Guibon, Mathieu D'aquin. Towards Ontology-Based Descriptions of Conversations with Qualitatively-Defined Concepts. In Proceedings of the 19th International Conference TOTh – Terminology & Ontology : Theories and applications, Chambéry (France), June 2025. |
| August 2024 | Barbara Gendron and Gaël Guibon. 2024. SEC : Context-Aware Metric Learning for Efficient Emotion Recognition in Conversation. In Proceedings of the 14th Workshop on Computational Approaches to Subjectivity, Sentiment, & Social Media Analysis, pages 11–22, Bangkok, Thailand. Association for Computational Linguistics. |
| July 2024 | Barbara Gendron and Gaël Guibon. SEC : contexte émotionnel phrastique intégré pour la reconnaissance émotionnelle efficiente dans la conversation. In Actes de la conférence conjointe JEP-TALN 2024. |
| December 2023 | Gaschi et al., 2023. Code-switching as a cross-lingual Training Signal : an Example with Unsupervised Bilingual Embedding. In Proceedings of the 3rd Workshop on Multi-lingual Representation Learning (MRL), pages 208–217, Singapore. Association for Computational Linguistics. |
| May 2023 | Blivet et al. Participation de l'équipe TTGV à DEFT 2023 : Réponse automatique à des QCM issus d'examens en pharmacie. Actes de Atelier DÉfi Fouille de Textes (DEFT) (DEFT'2023). |

## ☰ SKILLS

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| Programming languages | Python, R, Bash, Matlab, SQL requests |
| Development tools and frameworks | VSCode, Jupyter Notebooks, RStudio, Dataiku DSS, Git, Docker, PyTorch, Tensorflow |
| Other tools | LaTeX, Office : Word, Excel, PowerPoint, Final Cut Pro X (video editing) |

## 🗩 LANGUAGES

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| French | Mother tongue |
| English | Fluent. Cambridge English Proficiency Certificate, C1 level, obtained in June 2021 |
| Spanish | Communication skills |
| Japanese | Basic notions. Japanese Level Proficiency test, N5 level obtained in December 2021 |

## 💡 INTERESTS, CLUBS AND SOCIETY INVOLVMENT

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| Today<br>2015 | **Voluntary worker as science communicator assistant, PAVILLON DE MANSE, Chantilly, France**<br>❯ Video editing for communication support on this high place of French industrial heritage<br>❯ Assisting scientific workshops conception and animation with qualified science communicators<br>[Video editing] [Sense of pedagogy] [Running projects] [Communication skills] |

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| Music | Electric guitar within a group (9 years), involved in some concerts |
| Sport | Tennis (4 years), table tennis (2 years), road and trail running (10k, half marathon) |