







ARTHUR THUY

NLP Researcher | PhD Researcher in Machine Learning

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PROFILE



PhD researcher in Machine Learning, specializing in Natural Language Processing and Uncertainty Quantification with neural networks. Passionate about advancing Machine Learning applications through innovation and collaboration, employing creative problem-solving and analytical skills to tackle complex challenges.

EXPERIENCE

Ph.D., Data Analytics cluster of Business Economics
Ghent University



-  Aug 2021 – Ongoing
-  Ghent, Belgium
- Supporting personalized learning for students with natural language processing techniques, extracting insights from unstructured text
 - Ensuring safe deployment of ML models in industrial applications by quantifying uncertainty, determining when a model's output should (not) be trusted
 - Dissertation supervisor: Prof. dr. Dries F. Benoit

Data Engineer, summer internship
element61

-  Jun 2020 – Aug 2020
-  Brussels, Belgium
- Python web scraping of e-commerce webshops
 - Microsoft Azure Data Storage and DevOps CI/CD
 - PySpark pipeline to extract, transform, and load raw web data
 - Apache Airflow scheduling and orchestration of the workflow


EDUCATION

M.Sc., Business Engineering: Data Analytics
Ghent University




-  Sep 2019 – Jul 2021
-  Ghent, Belgium
- Grade: Summa Cum Laude
 - Dissertation: “Bayesian Deep Knowledge Tracing: Towards Uncertainty Estimation” (supervisor Prof. dr. Dries F. Benoit)

B.Sc., Business Engineering
Ghent University

 Sep 2016 – Jul 2019

 Ghent, Belgium

HARD SKILLS

-  **Python**
PyTorch, TensorFlow, Transformers, Pandas, Keras, NumPy, Scikit-learn, Matplotlib, Optuna, Scrapy
-  **Terminal**
UNIX, Bash/Zsh, Git, Conda, Poetry
-  **Other**
R, SQL, PySpark, \LaTeX , MS Office

SOFT SKILLS

- Analytical thinking
- Attention to detail
- Problem-solving
- Time management
- Teamwork
- Effective communication



LANGUAGES

Dutch	C2	●	●	●	●	●	●
English	C1	●	●	●	●	●	●
French	B2	●	●	●	●	●	●
German	B1	●	●	●	●	●	●

HONORS & AWARDS

- PhD fellowship
Research Foundation Flanders (FWO)
 Nov 2021
- Sofico Award
Best student in Business Engineering – Data Analytics
 Oct 2021

REFEREES

Prof. dr. Dries F. Benoit
 Ghent University
 dries.benoit@ugent.be

PUBLICATIONS

Journal Articles

- **A. Thuy** and D. F. Benoit, “Fast and reliable uncertainty quantification with neural network ensembles for industrial image classification,” *Annals of Operations Research*, pp. 1–27, 2024.
- **A. Thuy** and D. F. Benoit, “Explainability through uncertainty: Trustworthy decision-making with neural networks,” *European Journal of Operational Research*, 2023.

Conference Proceedings

- **A. Thuy**, E. Loginova, and D. F. Benoit, “Active learning to guide labeling efforts for question difficulty estimation,” Springer, 2024.

TEACHING EXPERIENCE

Supervisor master’s theses

 2021 – Ongoing

- Responsible for the supervision of master’s theses in Business Engineering, one of which resulted in a journal publication.


Teaching assistant

 Aug 2021 – Feb 2022

- Responsible for the courses Data Mining (F000759) and Machine Learning (F000942)

CONFERENCE PRESENTATIONS


ORBEL39

 Jan 2025


 Maastricht, Netherlands

ECML-PKDD 2024

 Sep 2024

 Vilnius, Lithuania

EURO 2024

 Jun 2024

 Copenhagen, Denmark

ORBEL38

 Feb 2024

 Antwerp, Belgium

EURO 2022

 Jul 2022

 Helsinki, Finland

VARIA

- Expected to graduate in October 2025
- Driver’s license B