

Arthur Thuy

PHD RESEARCHER AT GHENT UNIVERSITY

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Personal Profile

I am a PhD researcher at the Data Analytics cluster of the Faculty of Economics at Ghent University. My PhD focuses on supporting business decision-making with uncertainty estimation in neural networks, communicating when a model's output should (not) be trusted for decision-making. I work primarily on applications in the manufacturing domain and in educational data mining.

Academic Experience

Ghent University

Ph.D., Data Analytics cluster of Business Economics

- Research Foundation Flanders (FWO) fellowship
- Supporting business decision-making with uncertainty estimation in neural networks
- Dissertation supervisor: Prof. dr. Dries Benoit

Ghent, Belgium

Aug 2021 – Present

Ghent University

M.Sc., Business Engineering: Data Analytics

- Grade: Summa Cum Laude
- Dissertation title: "Bayesian Deep Knowledge Tracing: Towards Uncertainty Estimation"
- Dissertation supervisor: Prof. dr. Dries Benoit

Ghent, Belgium

Sep 2019 – Jul 2021

Ghent University

B.Sc., Business Engineering

- Grade: Magna Cum Laude

Ghent, Belgium

Sep 2016 – Jul 2019

Professional Experience

Ghent University

Contributor on the Dodona platform, part-time internship

- Created R programming exercises for the courses Data Mining and Machine Learning, under the supervision of Prof. dr. Dries Benoit.

Ghent, Belgium

Feb 2021 – Feb 2021

Everest Analytics

Machine Learning Engineer, part-time internship

- Non-profit organization connecting students with a passion for data science to social impact organizations.
- Collaborated with a six-person team to develop a model for predictive building control.
- Built neural network forecasting models with TensorFlow and Keras.

Ghent, Belgium

Sep 2020 – Nov 2020

element61

Data Engineer, summer internship

- Python web scraping of e-commerce websites.
- Microsoft Azure Data Storage and DevOps CI/CD.
- PySpark pipeline to extract, transform, and load (ETL) raw web data into clean data.
- Apache Airflow scheduling and orchestration of the workflow.

Brussels, Belgium

Jun 2020 – Aug 2020

Skills

Programming Python (Pandas, PyTorch, TensorFlow, Keras, NumPy, Scikit-learn., Matplotlib, etc.), R (ggplot2), SQL, Julia.

Miscellaneous Linux, Shell (Bash/Zsh), \LaTeX , Git, Microsoft Office.

Soft Skills Time Management, Teamwork, Problem-solving, Presenting, Report Writing.

Languages Dutch (native), English (fluent), French (intermediate), German (intermediate).

Honors & Awards

Nov 2021 **PhD fellowship**, Research Foundation Flanders (FWO)

Brussels, Belgium

Oct 2021 **Sofico Award**, Best student in Business Engineering – main subject Data Analytics

Ghent, Belgium

Publications

JOURNAL ARTICLES

Explainability through uncertainty: Trustworthy decision-making with neural networks
Arthur Thuy, Dries F Benoit
European Journal of Operational Research. Elsevier, 2023

Conference & Workshop Presentations

Feb 2024	ORBEL38 , Annual Conference of the Belgian Operational Research Society	<i>Antwerp, Belgium</i>
Mar 2023	Flanders Make Symposium 2023 , Annual Scientific Conference of the Flanders Make research centre	<i>Antwerp, Belgium</i>
Jul 2022	EURO 2022 , European Conference on Operational Research	<i>Helsinki, Finland</i>

Teaching experience

Supervisor master theses

Responsible for the supervision of master theses in Business Engineering *2021 – present*

Teaching assistant

Responsible for the courses Data Mining (F000759) and Machine Learning (F000942) *Aug 2021 – Feb 2022*

Interests

Cooking	I love exploring Asian cuisine as it offers opportunities to express creativity and master new cooking techniques.
Motorcycles	Riding motorcycles brings me both a feeling of freedom and a strong sense of community with fellow riders.
Running	I enjoy running in nature to clear my head and maintain overall fitness.