Quentin Meeus

With a strong foundation in business and advanced technical skills, I excel in building and optimizing neural networks for speech and natural language processing. My research focuses on developing multilingual models, optimizing for low-resource environments, and implementing efficient finetuning techniques.

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EXPERIENCE

PhD researcher — KU Leuven — 2020-2024

During my PhD, I researched methods to improve low resource spoken language understanding, that is, how to train neural networks to understand speech with small datasets. My PhD journey resulted in 5 publications, 4 new architectures and various pretrained models and datasets released publicly. Alongside the research, I had academic duties such as teaching and coaching last-year students with their thesis.

Machine Learning Intern — Euranova — 2018

The Generative Adversarial Network is the ancestry of modern Diffusion Models for computer vision. During my internship, I reproduced a semi-supervised GAN for image classification and generation. This can be used for semi-automated labeling of images.

Business consultant — dFakto — 2016-2017

My duties included data analysis, visual reporting and support of the Project Management Office for a large financial institution.

Business developer — Partenamut — 2015-2016

Development and implementation of IT solutions for healthcare and an online platform for non-urgent medical transport booking.

EDUCATION

PhD Electrical Engineering — ESAT, KU Leuven — 2024

PhD thesis: **From Speech to Semantics: Adapting Pretrained Transformers for Low Resource Spoken Language Understanding**.

Master in Artificial Intelligence — CS, KU Leuven — 2019

Master thesis: **Semi-supervised autoencoders for long text classification.**

Master in Advanced Management — SBS-EM, ULB — 2015

Master thesis: **Topmob: A medical transport platform for greater mobility.**

Bachelor in Business Engineering — SBS-EM, ULB — 2013

TECHNICAL SKILLS

Python, Bash, SQL
PyTorch, Tensorflow, Huggingface, Weights & Biases and others
Git, Docker, Linux

PROGRAMMING AWARDS

Hackatrain 2019 – 1st place AI solution to improve security at railway crossings by automatically detecting objects and persons on the tracks

Hackathon 2017 – 2nd place Design and training of a machine learning model for early detection of failure in train components for NS

SPOKEN LANGUAGES

English (full), French (native), Dutch (good).

EXTRACURRICULAR ACTIVITIES

Mountaineering, ski touring, rock climbing, trail running, environment, technologies, single board computers.