Agata Mosińska

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WORK EXPERIENCE

DL Network Analytics **April 2023 – Present**

Machine Learning Engineer

- Developed a Python-based Retrieval-Augmented Generation (RAG) pipeline to extract and classify actionable insights from employee survey data across 5 companies, improving decision-making efficiency for HR teams.
- Applied integer-linear programming (Gurobi) to identify key influencers in organizational networks, enabling targeted communication strategies.

Tilburg University **June 2023 – August 2023**

Research Assistant

- Developed EEG preprocessing and phase-synchronization analysis workflows (MNE-Python) to quantify mother-infant brain-to-brain synchrony under the mother's smartphone distraction.
- Authored and presented research findings at the 19th NVP Winter Conference on Brain and Cognition (2023).

Microsoft **September 2022 – February 2023**

Cloud Solution Architect Intern

- Collaborated with the Data & AI team to develop end-to-end Azure solutions for enterprise clients.
- Built a fraud detection model in Azure ML Studio to identify and prevent fraudulent activities on Microsoft Azure, improving detection accuracy and reducing false positives.

Tilburg University **January 2022 – June 2022**

Research Internship

- Collected and analyzed music-perception data using Python and R, applying statistical modeling and data visualization techniques.
- Co-authored and presented research at the International Conference on Music Perception and Cognition (Tokyo, 2022).

EDUCATION

Jagiellonian University **October 2025 - present**

PhD, Human-AI Interaction *Cracow, Poland*

- Thesis topic: Uncertainty-aware AI for glioma radiotherapy contouring and its impact on clinician decision-making.

Technical University of Catalonia **September 2023 - June 2025**

MSc, Artificial Intelligence *Barcelona, Spain*

- Thesis: Developed an uncertainty-aware ensemble of deep learning models for brain tumor segmentation on the BraTS 2021 dataset, producing uncertainty maps to support clinical decision-making (grade 10/10).
- GPA 8.89/10; NTT DATA Scholarship (2023/2024), Allianz Technology Scholarship (2024/2025).

Tilburg University **August 2020 - August 2023**

BSc, Cognitive Science and Artificial Intelligence *Tilburg, The Netherlands*

- Minor in Data Science at the Eindhoven University of Technology.
- Thesis: EEG hyperscanning study on smartphone distraction and mother–infant neural synchrony (grade 8.5/10).
- GPA 8.94/10**,** graduated *cum laude*.

CERTIFICATIONS & SKILLS

- **Certifications:** Microsoft Azure Fundamentals, Microsoft Azure AI Fundamentals
- **Skills:**
  - **Python** (production code, OOP), Git, Linux/Unix, shell
  - **ML/DL**: TensorFlow, PyTorch, MONAI, scikit-learn
  - **LLM**: Retrieval-Augmented Generation pipelines, LangChain
  - **Data analysis & visualization**: Pandas, Matplotlib
  - **Backend**: FastAPI, Django
  - **Databases**: SQL
  - **MLOps**: CI/CD, Azure ML
  - **Medical imaging**: DICOM/NIfTI, SimpleITK, nibabel, FSL
  - **Methods**: segmentation, uncertainty quantification, calibration, evaluation (Dice/HD95 etc.)
- **Languages**: Polish (native), English (C2), Spanish (B1)

I consent to the processing of my personal data contained in the job application for the purposes necessary for the recruitment process (in accordance with the Personal Data Protection Act, Journal of Laws 2002, No. 101, item 926, as amended).