MIKKEL SKOVDAL

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EDUCATION

KU Leuven   Leuven, Belgium
MSc Applied Informatics: Artificial Intelligence   *Sep. 2022 – Jun. 2024*

UCLL   Leuven, Belgium
PBa Information Technology   *Sep. 2018 – Jun. 2021*

EXPERIENCE

Data Engineer   Sep. 2023 – Nov. 2024
TechWolf   *Ghent, Belgium*

- Developed and researched advanced NLP models, including transformer-based Multi-Lingual Skill Taggers (MLST), to enhance TechWolf's Skill Intelligence platform.
- Engineered scalable ETL pipelines using PySpark, GCP Dataflow, and BigQuery for processing large-scale skill and vacancy data, enabling efficient model training and data enrichment.
- Authored a VLAIO Baekeland PhD proposal focusing on "Dynamic representations for modeling career trajectories" investigating sequential transformer models and temporal dynamics to overcome limitations of static skill representations.
- Contributed to research on human-centric AI, model explainability, and benchmarking strategies for HR use cases (proficiency, workforce planning, career pathing) in alignment with GDPR and EU AI Act principles.

Research Intern   Jul. 2023 – Oct. 2024
Imec   *Leuven, Belgium*

- Designed and developed a novel Interactive Machine Learning platform to automatically deconstruct integrated circuits.
- Implemented an end-to-end pipeline with custom object detection models for identifying intricate parts.
- Built a human-in-the-loop verification system allowing engineers to visually inspect and correct AI predictions, feeding validated data back for model improvement.
- Built an automated retraining system; demonstrated model performance increase and reduced documentation time.

Software Engineer   Sep. 2022 – Dec. 2022
KU Leuven   *Leuven, Belgium*

- Developed an interactive educational [website](#) with Javascript to visualize fundamental AI algorithms (Minimax, Dijkstra, Policy Iteration, SVMs).
- Teach students through real-time interactive demos of machine learning algorithms.

AI Engineer   Aug. 2021 – Sep. 2022
DotDash   *Leuven, Belgium*

- Developed a custom Grafana [plugin](#) using Cypher for real-time monitoring of Neo4j graph databases.
- Built a real-time anomaly detection pipeline leveraging PySpark Streaming, Kafka, and MQTT for processing data streams.
- Created a job recommendation [platform](#) PoC with Django.

Software Engineer Intern   Feb. 2021 – Jun. 2021
Roborana Group   *Kontich, Belgium*

- Developed UiPath components and Python scripts to integrate AI models into RPA workflows, automating business processes.
- Created an end-to-end forecasting [system](#) using ECDC public data, featuring daily automated model retraining to predict European vaccination trends.

PROJECTS

LStat Datathon - AI Artwork Generation | *Python, Diffusion Models, AI*   Feb. 2023

- Developed and trained a text-to-image diffusion [model](#) on a proprietary art dataset from scratch.
- Created a pipeline to generate high-quality artwork based on textual prompts.

Roundnet Noorderkempen - Website & Management | *HTML, CSS, JS*   Jun. 2022 – Now

- My friends and me started a local roundnet club in Turnhout.
- I built and maintain a responsive [website](#) for the club.

Technical Skills

Languages: Python, SQL, Java, JavaScript, C++
AI / ML: PyTorch, Scikit-learn, Transformers, LLMs (GPT-2, Bert, Fine-tuning), Diffusion Models, Object Detection (YOLOv7), OpenCV, ONNX, LangChain, Pandas, NumPy, IML
Data Engineering: PySpark, Apache Kafka, MQTT, Google Dataflow, ETL Pipelines, Data Streaming
Cloud Platforms: GCP (Vertex AI, BigQuery, GCS, Dataflow), AWS (Bedrock, S3)
MLOps / DevOps: Docker, Kubernetes, Git, GitLab CI/CD, GitHub, JIRA
Databases & Monitoring: Neo4j, BigQuery, Grafana
Frameworks & UI: PyQt, Streamlit, FastAPI, Flask, Django
Other Tools: KLayout, UiPath

Languages

Dutch - Native
English - Fluent
French - Fair

References

Jens-Joris Decorte	TechWolf
Founders Associate	*jensjoris@techwolf.ai*

Murat Kocak	Imec
Artificial Intelligence Researcher	*Murat.Kocak@imec.be*