

Mikolaj Hilgert

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SKILLS

Technologies	C# (.NET), Python, Java (Spring), Javascript (NestJS), Scala, Azure, Spark, Hadoop, Airflow, LangChain, Pinecone, Kubernetes, MongoDB, Docker
Tools/Skills	Git, SQL, Microsoft Azure, Google Cloud, DevOps, MLOps, Adobe Suite, Office, Cinema4D, Postman, \LaTeX
Languages	English (native), Polish (native), Czech (proficient), German (B1)

EXPERIENCE

Software Developer (Part-Time) **Sep 2024 — Present**
CY2 *s-Hertogenbosch, The Netherlands*

- Developing a multi-tenant LLM-powered chatbot FAQ platform to answer user queries based on a custom knowledge base composed of PDF files.
- Taking a leading role in the project, supervising progress and delivering presentations to CY2 leadership.

Graduate Data Science Intern (Full-Time) **Feb 2024 — Jul 2024**
ASML *Veldhoven, The Netherlands*

- Thesis title: Impact of parallel unscheduled machine downs on eXtreme Long Down (XLD) frequency of DUV lithography systems.
- Conducted data analysis and developed an algorithm to quantify the impact of staffing on XLD frequency in lithography systems.
- Explored machine learning approaches to predict XLD occurrences, identifying future research opportunities to enhance predictive performance.

Trainee Software Engineer (Part-Time) **Mar 2023 — Nov 2023**
CM.com (prev. Building Blocks) *Tilburg, The Netherlands*

- Collaborated on improving the AI Decisioning Engine which supplies mass consumer data personalisations, increased conversion rates, order value and lower returns for clients like Coca-Cola, Corendon, Blokker and Basic-fit.
- Enhanced the IntelliJ IDEA development plugin, which was utilised on a daily basis by over 20 data scientists, expediting the development cycle and streamlining the delivery of tailored solutions for all Building Blocks' clients.

Software Engineering Intern (Full-Time) **Sep 2022 — Feb 2023**
CM.com (prev. Building Blocks) *Tilburg, The Netherlands*

- Implemented an advanced user detail encryption module to a mature multi-million-line codebase, enhancing data security and GDPR compliance.
- Utilized Apache Spark for efficient large-scale data processing, successfully executing load tests on datasets comprising millions of records and achieving results within sub-second latency.
- Developed a data loader for Building Blocks' proprietary platform for files stored in Azure Blob Storage. The data loader was used to fetch data for basket prediction, anti-churn AI models as well as boosting efficiency of workflows, improved system observability and data integrity, while simultaneously eliminating the need for custom code.

Research Student Intern (Part-Time) **Feb 2019 — Jun 2019**
Microsoft *Prague, Czechia*

- Conducted Market research on Quantum computing and presented findings for an internal Hackathon.

NOTABLE PROJECTS

Full-Stack Developer **Sep 2023 — Jan 2024**
LabelGenius - Individual University project

- An online platform that connects data providers with skilled labellers, streamlining image data labeling to create high-quality data-sets that are used in AI and machine learning applications.
- Developed a micro-service architecture in C# using .NET 6.0, with deployment to a managed Kubernetes cluster in Microsoft Azure.

Data Pipeline Developer **Sep 2021 — Jan 2022**
Canon - Group University project

- Collaborated in a high-performing team of 5 within a Scrum agile framework.
- Contributed to the design and development of an ETL data pipeline using Python and Apache Airflow.

EDUCATION

Master of Science in Data Science in Business and Entrepreneurship , JADS (Tu/e & Tilburg University)	Aug 2024 — Jul 2026
Pre-master in Data Science in Business and Entrepreneurship , JADS (Tu/e & Tilburg University) Grade: 8.0	Jan 2023 — Jun 2023
Bachelor of Science in ICT & Software Engineering , Fontys University of Applied Science Grade: 9.2	Sep 2020 — Jul 2024