# 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** Git, SQL, Adobe Suite, Office, Cinema4D, Postman, ŁTFX Languages

English (native), Polish (native), Czech (proficient), German (B1)

EXPERIENCE

### Data Science Internship (Full-Time) **ASML**

Feb 2024 — Present

Veldhoven, The Netherlands

• Thesis title: Impact of parallel unscheduled machine downs on extreme Long Down (XLD) frequency of DUV lithography systems.

## **Trainee Software Engineer (Part-Time)**

Mar 2023 — Nov 2023

CM.com (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 Internship (Full-Time)

Sep 2022 — Feb 2023

CM.com (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 Internship (Part-Time)

Feb 2019 — Jun 2019

Prague, Czechia

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

#### NOTABLE PROJECTS

Microsoft

#### **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.
- Integrated with various Azure solutions to enhance performance, scalability and security of the application.
- Source code can be found on my GitHub profile.

# **Full-Stack Developer**

Sep 2023 — Jan 2024

CY2 - Group University project

- Lead a team of 6 Fontys students, supervising project progress and delivering presentations to CY2 leadership.
- Developed a multi-tenant Chatbot FAQ system designed to answer questions from a custom knowledge base comprised of PDF files. The system leveraged the advanced conversational capabilities of OpenAI's Language Model for enhanced user interactions.

#### **Data Pipeline Developer**

Sep 2021 — Jan 2022

Canon - Group University project

- The system is used to process raw printer data and display results on a dynamic dashboard.
- 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**

Pre-master in Data Science in Business and Entrepreneurship, JADS (Tu/e & Tilburg University) Grade: 8.0 Jan 2023 — Jul 2023

⇒ Courses: Programming, Data-structures and Algorithms, Introduction to Machine Learning, Foundations of Databases & Statistics for Data Scientists

Bachelor of Science in ICT & Software Engineering, Fontys University of Applied Science International Baccalaureate Diploma and IGCSE, Prague British International School (PBIS) 2020 - 2024

2007 - 2020