NIKLAS KORMANN

EDUCATION

ÉCOLE POLYTECHNIQUE
PARIS

PhD Computer Science (funded by: ANR PRC grant) — 04/2025 – today

- *Supervised by Prof. Benjamin Doerr and Prof. Johannes Lutzeyer.*
- *Main topics: Deep Learning, Graph Representation Learning*
- *Research topics include: graph heterophily, digital pathology, and geometric GNNs*
- *Built solid knowledge of machine learning and deep learning theory and first experience in practical application. Additionally, interdisciplinary subjects ensured understanding on how to implement AI technologies into practical applications and business cases.*

FACHHOCHSCHULE WEDEL (UNIVERSITY OF APPLIED SCIENCES)
WEDEL

M. Sc. Data Science & Artificial Intelligence (final grade: 1.2) — 10/2022 – 03/2025

- *Thesis title: "Application of Graph Neural Networks in Histopathology" in cooperation with École Polytechnique – Supervised by Prof. Hendrik Annuth and Prof. Johannes Lutzeyer.*
- *Main subjects: Deep Learning, Graph Representation Learning, Computer Vision, Econometrics, Reinforcement Learning, Symbolic AI, Digital Transformation.*
- *Special track in technology: Robotics, Manufacturing Automation, Workshops on SPSS, CNC, and Circuit Technology.*
- *Built solid knowledge of machine learning and deep learning theory and first experience in practical application. Additionally, interdisciplinary subjects ensured understanding on how to implement AI technologies into practical applications and business cases.*

B. Sc. Industrial Engineering (final grade: 1.4, funded by: Grohe Treuhand Stiftung) — 09/2018 – 03/2022

- *Thesis title: "Concept development of a cross-technology control loop to improve the dispensing condition of offset dimension on doors, based on targeted and automated data analysis and visualisation" in cooperation with BMW AG – Supervised by Prof. Carsten Burmeister and Reinhard Weindl.*
- *Subject included: Manufacturing Systems, Quality Management, Thermodynamics, Engineering Mechanics, Physics, Material Science, Operations, Accounting, Corporate Finance, Strategy Management & Controlling*
- *Special track in computer science: Introduction to Java, Database, Web-Technologies.*
- *These subjects provided me with a very broad understanding of processes and products of industrial companies in a variety of fields.*

LONDON METROPOLITAN UNIVERSITY
LONDON

Semester Abroad (grade: 1.3) — 09/2020 – 01/2021

- *Subject included: Management Theory, Workshop Entrepreneurship, International Management, Corporate Finance.*
- *The semester abroad strengthened my understanding of management topics. Also, I improved my academic English skills.*

ALBERT-SCHWEITZER-GYMNASIUM
HAMBURG

General Qualification for University Entrance (final grade: 1.9) — 08/2008 – 07/2016

- *Subjects included: Mathematics, Physics, Sport, Chemistry, Biology, Philosophy*

RESEARCH & MACHINE LEARNING EXPERIENCE

ÉCOLE POLYTECHNIQUE
PARIS

Master Thesis — 09/2024 – 01/2025

- *Applications of graph neural networks in histopathology for health classification of glomeruli in kidney tissue.*

Research Internship Machine Learning — 04/2024 – 09/2024

- *Research on heterogeneous and heterophilic graph neural networks.*
- *Translational research on applications of graph neural networks in histopathology for classification of glomeruli in kidney tissue.*

FACHHOCHSCHULE WEDEL (UNIVERSITY OF APPLIED SCIENCES)
WEDEL

Deep Learning Project — 09/2023 – 02/2024

- *Development of a trading bot with multiple deep learning approaches.*
- *Worked on stock price forecasting with transformers modified for time series prediction.*
- *In this project I practised engineering of deep learning architectures and learned how to develop an end-to-end machine learning micro service for training, testing and prediction.*

Robotics Project — 04/2023 – 07/2023

- *Solving a children puzzle with an industrial KUKA robot.*
- *Applied computer vision techniques and robotics control.*

Natural Language Processing Project — 04/2023 – 07/2023

- *Sentiment analysis of tweets, and movie reviews and comparing the capability of generalisation of classical approaches and fine-tuned pretrained deep learning model.*
- *Focused on fine-tuning a Transformer model and the evaluation.*

INDUSTRIAL EXPERIENCE

VATTENFALL   *HAMBURG*
Working Student Data Science in Energy Trading   10/2023 – 03/2024
- *Price and demand forecasting with various time series in the energy market. Developed an ensemble method with regression model for different seasonality patterns.*
- *Implemented of a fully automated and generalised container-based pipeline for time series analysis, model selection, model training and forecasting.*
- *Evaluated a nearest neighbours approach for recognition and clustering of daily energy production patterns.*

HORVATH & PARTNER   *HAMBURG*
Consulting Internship for Performance Management for Industrial Goods & High Tech   04/2022 – 07/2022
- *Development of dashboard concepts for business performance management in SAP SAC.*
- *Evaluation of intercompany price adjustments on relevant key performance indicators.*
- *Preparation of customer offerings.*

BMW   *DINGOLFING*
Intern & Bachelor Thesis in the Department Product Methods and Quality Planning   09/2021 - 02/2022
- *Data-based process optimisation and failure source analysis in white body construction to minimise flush and gap dimension of car doors. Finally, implemented a control loop, with automated data analysis along the production process using MS PowerBI and SQL.*
- *Implemented an App to track employee attendance during COVID with MS PowerApps.*
- *First practical experience with using statistical data to improve industrial processes at large scale.*

HCP - HANSEATIC CONSULTING PROJEKTGESELLSCHAFT   *HAMBURG*
Freelance Work as a Student Management Consultant   09/2019 - today
- *Multiple external consulting projects with various topics from change management to strategic marked analysis in different positions: Project management on seven projects, project lead on one project and consultant on two projects.*
- *All projects were completely carried out by students only.*
- *Developed the skill to decompose complex matters and solve problems independently and in a team.*

VOLUNTEERING, LEADERSHIP & INTERNATIONAL EXPERIENCE

HCP - HANSEATIC CONSULTING PROJEKTGESELLSCHAFT UG   *HAMBURG*
Managing Director   08/2022 – 07/2023
- *Responsibility for the financial and legal execution of the project business with a six-figure turnover.*
- *Management of the project company, which included accounting, creation of financial statements, looking over 30 freelance consultants and drawing up and signing contracts.*
- *Managing a company required accurate work with attention to detail.*

HANSEATIC CONSULTING E. V.   *HAMBURG*
Executive Board Member for Finance and Legal Affairs   01/2020 – 09/2020
- *Strategy development and implementation and leadership of the association.*
- *Responsibility for the association's budget in five-figure range.*
- *First leadership experience in a professional context.*

WORK & TRAVEL   *AUSTRALIA*
Employment as Waiter and Farm Worker   09/2017 – 07/2018

HAMBURGER VERKEHRSVERBUND GMBH   *HAMBURG*
Voluntary Ecological Year   08/2016 – 07/2017

ACHIEVEMENTS

UNIVERSITY AWARD
Awarded by the Wedel University Association for an outstanding bachelor's thesis   03/2022

SCHOLARSHIP
For Industrial Engineers at FH Wedel by the Grohe Treuhand Stiftung   06/2019

PUBLICATIONS
- N. Kormann, M. Ramuz, Z. Nisar, N. S. Schaadt, H. Annuth, B. Doerr, F. Feuerhake, T. Lampert, J. F. Lutzeyer, "HIEGNet: A Heterogenous Graph Neural Network Including the Immune Environment in Glomeruli Classification", *Medical Imaging with Deep Learning (MIDL),* 2025

SKILLS

Languages:	German *(mother tongue)*, English *(business fluent)*, French *(basics)*
Technical:	Python, Machine Learning, Deep Learning, Data Engineering (Docker, Kubernetes, Drone), R, SQL, Git, Java, MS Office, MS PowerBI