KARINA SINDERMANN

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EDUCATION

University of Nebraska-Lincoln *August 2022 - Present*
Doctoral Student in Supply Chain Management and Analytics

University of Augsburg, Germany *October 2019 - May 2022*
Master of Science in Business and Information Systems Engineering GPA: 3.7 (German 1.6)
Thesis: "Optimization of medical staff scheduling using mathematical programming at the University Hospital of Augsburg"

University of Augsburg, Germany *October 2015 - September 2019*
Bachelor of Science in Business and Information Systems Engineering GPA: 3.3 (German 1.98)
Thesis: "Development of a model for solving vehicle routing problems with time windows (VRPTW) in the field of home health care - additional programming of the models in IBM ILOG CLPEX"

EXPERIENCE

University of Nebraska-Lincoln *August 2022 - Present*
Graduate Research Assistantship in the Supply Chain Management and Analytics Department

Infra Construct Bau Ltd., Wallersdorf, Germany *April 2021 - October 2021*
Intern

University of Augsburg, Germany *October 2020 - March 2021*
Research Assistant in the Health Care Operations/Health Information Management Department,

University Hospital Augsburg, Germany *October 2012 - February 2013*
Nursing Assistant at the VITA (care unit for integrated traumatology in old age)

ACADEMIC PROJECTS AND RESEARCH EXPERIENCE

Masters Research, University of Augsburg, Germany *May 2022*
- Developed a mathematical optimization model to improve duty schedules for anesthesiologists, considering workload and fairness aspects.
- Implemented the model using CPLEX and achieved a significant reduction in scheduling time.
- Innovatively combined structures of relational databases and optimization techniques to formulate an efficient model.

Research Assistant, Health Care Operations/Health Information Management, University of Augsburg, Germany *August 2020*
- Contributed to a project forecasting bed occupancy during the COVID-19 pandemic using Monte Carlo simulation and data analysis.
- Utilized data from governmental institutions to predict hospital bed needs and resource availability.

ACTIVITIES

auxHOT - Augsburg Healthcare Operations Talents *August 2019 - May 2022*
- Member of a healthcare operations group aimed at fostering research and academic collaboration.

SKILLS

Mathematical Optimization: CPLEX (DOcplex), Excel Solver
Programming Languages: Python, C, Visual Basic for Applications (VBA)
Data Analysis and Machine Learning: Weka, Pandas, Scikit-learn, PyTorch, BeautifulSoup
Database Management: SQL
Statistical Analysis: R
Languages: Fluent in English and German

AWARDS AND SCHOLARSHIPS

Chancellor and Ogle Fellowship, University of Nebraska-Lincoln *August 2022 - Present*