

## Curriculum Vitae

Currently, I am pursuing a Ph.D. at the IT University of Copenhagen. My academic focus revolves around Business Intelligence & Analytics and Decision Support Systems. With a foundation laid by my master's thesis on the accessibility of automated deep learning, my research now delves into the decision-making processes involved with leveraging large datasets and complex machine learning algorithms. Professionally, I contribute as a PhD student within the Research Group: Information Systems & Digital Innovation at the IT University of Copenhagen. My ongoing Ph.D. project addresses the growing challenges of leveraging vast data volumes and complex machine-learning algorithms in supporting decision-makers in various fields. This research critically examines the trade-offs between the expanding data volume and machine learning complexity against sustainability and business value. I am currently working on the development of machine learning models for supporting anesthetists, in handling surgical patients' pain and opioid adverse events.

## Employment

### PhD student

PhD fellow

Business IT

IT University of Copenhagen

1 Sept 2023 → 31 Aug 2026

### Information Systems and Digital Innovation (ISDI)

IT University of Copenhagen

Copenhagen, Denmark

1 Sept 2023 → 1 Nov 2026

## Research outputs

**Sustainability and Business Value of Big Data Analytics and Machine Learning: Data Volume and Algorithmic Complexity: What is the trade-off between data volume and algorithm complexity for machine learning performance?**

Pedersen, N. K., 2 Oct 2023.

**Midas: a Python Framework for Automated Generating and Training of Neural Network Models**

Pedersen, N. K., Meged, A. W. & Johansen, R. A., 6 Dec 2022.

## Academic Experiences

2024 – Now

Member of "OPI•AID"

•<https://opiaid.dk/>

•OPI•AID aims to individualize perioperative opioid treatment to reduce pain, adverse events, complications, and overall opioid use while facilitating effective and high-quality patient care.

•Project: Development of machine learning models and opioid prediction algorithms.

2024

PhD Course: "Frontiers in Digital Innovation" by the Swedish Center for Digital innovation.

•"Frontiers in Digital Innovation" by the Swedish Center for Digital Innovation – 7,5 ECTS Point

•"Data Science as a Research Method" by Universität Paderborn – 6 ECTS Point

2023

Teaching Staff – IT University of Copenhagen

•Critical Big Data Management: Second part of the Big Data Specialization within the master's degree Digital Innovation and Management

2022-2023

Lecture Assistant – IT University of Copenhagen

•Big Data Processes: First part of the Big Data Specialization within the master's degree Digital Innovation and Management

•Critical Big Data Management: Second part of the Big Data Specialization within the master's degree in Digital Innovation and Management