EDUCATION COMMITTEE FOR DATA SCIENCE
Jens Ledet Jensen, Aarhus Universitet **6. september 2024**

1 Catalogue of supervisors for the master thesis

The list below with potential supervisors for the master thesis is organized according to the department to which the supervisor is affiliated. For each supervisor is a few keywords describing their field of interest, as well as an email address. It is yourself that approach a person to hear about the possibilities for writing a master thesis. You can either approach a person because you have an interest for the subject in general, or because you have your own idea for a project (perhaps in cooporation with a firm).

In the first half of october you are invited for a consultation with the head of the education committee (Jens Ledet Jensen).

I recommend that you have found a supervisor at the end of November at the latest (note the deadline December 1 for a supervisor from Department of Economics and Business Economics). You must all fill in a master thesis contract via https://kontrakt.nattech.au.dk/login.

1.1 From Department of Mathematics

1. Lars Nørvang Andersen (larsa@math.au.dk)
   Bioinformatics; Regression analysis; Statistical Learning; BYO data

2. Andreas Basse-O'Connor (basse@math.au.dk)
   Bayesian Networks and Graphical Models; Random Constraint Satisfaction Problems

3. Nina Therese Dörnemann (ndoernemann@math.au.dk)
   High-dimensional statistics; Random matrix theory; Resampling methods

4. Ute Hahn (ute@math.au.dk)
   Computational and nonparametric statistics; Multiple testing; Markov chain monte carlo

5. Christian Pascal Hirsch (hirsch@math.au.dk)
   Topological data analysis; random networks

6. Asger Hobolth (asger@math.au.dk)
   Bioinformatics; Statistical Learning; BYO data

7. Jens Ledet Jensen (jlj@math.au.dk)
   Statistical inference for high dimensional data; Saddlepoint approximations

8. Markus Kiderlen (kiderlen@math.au.dk)
   Survey sampling

9. Tim Kutta (tim.kutta@math.au.dk)
   Time series; Change point analysis; Differential privacy

1.2 From Department of Computer Science

1. Ira Assent (ira@cs.au.dk)
   Data Analytics; Data management; Data mining; Data-Intensive Systems; Machine learning; Parallel algorithms; Query processing; Search; Text mining

2. Gerth Stølting Brodal (gerth@cs.au.dk)
   Algorithms, Data Structures and Foundations of Machine Learning

3. Kristoffer Arnsfelt Hansen (arnsfelt@cs.au.dk)
   Computational Complexity and Game Theory

4. Kasper Green Larsen (larsen@cs.au.dk)
   Theory of machine learning; Data structures; Algorithms; Lower bounds; Cryptography

5. Davide Mottin (davide@cs.au.dk)
   Graph exploration, which lays on the broad areas of database, data mining, and machine learning.

6. Marianne Graves Petersen (mgraves@cs.au.dk)
   interaktionsdesign; Human computer interaction; Augmented reality (AR); Shape-changing interfaces

7. Hans-Jörg Schulz (hjschulz@cs.au.dk)
   Visual analysis of structured data, in particular hierarchically and network-structured data

8. Chris Schwiegelshohn (schwiegelshohn@cs.au.dk)
   Algorithm design; Online, streaming, approximation and learning algorithms

1.3 From Bioinformatics Research Centre

1. Thomas Bataillon (tbata@birc.au.dk) Biodiversitet; Bioinformatik; Evolution; Genetik og molekylær evolution; Monte Carlo-simulering

2. Christian Storm Pedersen (cstorm@birc.au.dk)
   Algoritmik; Bioinformatik Design og analyse af algoritmer og datastrukturer; Effektiv algoritmeimplementering; Evolutionære træer; Genomanalyse; Genstruktur identifiaktion; Sekvensanalyse; Strukturel analyse; Strukturforudsigelse; Tekstalgoritmer og datastrukturer

1.4 From Department of Economics and Business Economics

If you arrange for a supervisor from Department of Economics and Business Economics you must register this finding the appropiate link on the page https://studerende.au.dk/en/studies/subject-portals/business-administration/bachelors-project-and-masters masters-thesis-msc-in-economics-and-business-administration You must make this registration before December 1 (or June 1 for a master thesis project in the autumn). Independendt of the above registration you must fill in a contract for the master thesis at https://kontrakt.nattech.au.dk/login.

1. Simon Bodilsen (sibo@econ.au.dk
   Volatility modelling and forecasting; Applied machine learning in economics and finance; Time series econometrics; Causal inference; Applied microeconometrics

2. Leopoldo Catania (leopoldo.catania@econ.au.dk)
   Financial econometrics; Time series econometrics; Risk management; Volatility

3. Bent Jesper Christensen (bjchristensen@econ.au.dk)
   Prediction and forecasting; Causal inference; Machine learning; Financial econometrics; Microeconometrics; Macroeconometrics; Time series econometrics; Volatility

4. Sune Lauth Gadegaard (sgadegaard@econ.au.dk)
   Optimization; Scheduling and workforce planning; Vehicle routing; Facility location; Production planning

5. Phillip Heiler (pheiler@econ.au.dk)
   Causal inference; Causal machine learning; Quantitative policy analysis

6. Morten Berg Jensen (mbj@econ.au.dk)
   Machine learning, Business intelligence, Customer and People Analytics

7. Benjamin Dybro Liengaard (benlien@econ.au.dk)
   Retrieval augmented generation; Customer analytics; Partial least squares; Business intelligence

8. Jens Lysgaard (lys@econ.au.dk)
   Routing; Distribution planning; Heuristics; Optimization methods

9. Lars Relund Nielsen (larsrn@econ.au.dk)
   Optimization; Simulation; Production planning and control; Scheduling, routing, distribution and transportation; Multi criteria optimization

10. Morten Ørregaard Nielsen (mon@econ.au.dk)
    Time series econometrics; Econometric methods and theory; Robust econometrics; Financial econometrics

11. Per Baltzer Overgaard (povergaard@econ.au.dk)
    Microeconomic theory (information, contracts, mechanism design, auctions, game theory)

12. Mikkel Sølvsten (miso@econ.au.dk)
    Econometric methods and applications; Big data and big models; Statistical and machine Learning; Robustness; Econometrics for panel data

13. Luke Nicholas Taylor (lntaylor@econ.au.dk)
    Nonparametric analysis in cross sectional data; Discrimination in crime and justice

14. Bezirgen Veliyev (bveliyev@econ.au.dk)
    Financial econometrics; Machine learning and statistics; Microeconometrics.

15. Jesper Wulff (jwulff@econ.au.dk)
    Deep learning; Large language models; Business intelligence

16. Allan Würtz (awurtz@econ.au.dk)
    Econometric methods; Machine Learning methods; Prediction

1.5 From Department of Electrical and Computer Engineering

If you have an interest byond those listed below you can try to contact Christian Fischer Pedersen (cfp@ece.au.dk) who is representing the department in the education committee.

1. Mads Dyrmann (madsdyrmann@ece.au.dk)
   Deep learning; Computer vision

2. Alexandros Iosifidis (ai@ece.au.dk)
   Machine learning; Computational intelligence

3. Kaare Mikkelsen (mikkelsen.kaare@ece.au.dk)
   Deep learning

4. Naveed Ur Rehman (naveed.rehman@ece.au.dk)
   Machine learning; Statistical signal processing