inf534 - Probabilistic Modelling II

Module label
Probabilistic Modelling II
Module code
inf534
Credit points
3.0 KP
Workload
90 h

Used in course of study
- Master's Programme Business Informatics > Bereichswahlmodule
- Master's Programme Computing Science > Angewandte Informatik
- Master's Programme Embedded Systems and Microrobotics > Akzentsetzungsmodulle

Contact person
Module responsibility
- Claus Möbus

Authorized examiners
- Claus Möbus
- Die im Modul Lehrenden

Entry requirements
Skills to be acquired in this module
Probabilistic models are generated with special tools (e.g. BUGS, JAGS, STAN) or domain specific programming languages (WebPPL, PyMC3, … , etc.). If they mimic cognitive processes of humans (e.g. pilots, drivers) or animals they could be used as cooperative assistance systems in technical or financial systems like cars, robots, or recommenders. In this part of the seminar we read, present, and discuss recent research papers.

Professional competence:
The students:

- learn to connect problem- with model classes to come up with practical solutions

Methodological competence
The students:

- acquire advanced skills in the design, implementation, and identification of probabilistic models with Bayesian methods
- acquire knowledge about alternative machine learning methods

Social competence
The students:

- learn to present and discuss probabilistic theories, methods, and models

Self-competence
The students:

- reflect and evaluate chances and limitations of probabilistic approaches
- learn to deliberate on machine-learning alternatives

Module contents
Theories, methods, and examples of Bayesian models with practical applications
Reader's advisory
Recent publications
Links
http://www.uni-oldenburg.de/en/computingscience/lcs/probabilistic-programming/
Language of instruction
German
Duration (semesters)
1 Semester
Module frequency
halbjährlich
Module capacity
unlimited
Reference text
Associated with the module:

- inf533 Probabilistische Modellierung I

Module level
AS (Akzentsetzung / Accentuation)
Module art
je nach Studiengang Pflicht oder Wahlpflicht
<table>
<thead>
<tr>
<th>Lern-/Lehrform / Type of program</th>
<th>Vorkenntnisse / Previous knowledge</th>
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<td>Basic programming skills</td>
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<tr>
<th>Examination</th>
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<tbody>
<tr>
<td>Final exam of module</td>
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<td>seminar talk, reflective written summary</td>
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<td>SWS</td>
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