Data-driven Modeling - Machine Learning

TECHNISCHE UNIVERSITÄT DARMSTADT

Introductory Information
April 28, 2025

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The DM-ML module is worth 6 Credit Points (CP) and consists of lectures, theory, and programming exercises. The course will be held on-site for lectures and exercises. For more information, see further below. For questions regarding the organization of the module, please direct your messages towards sebastian.wirth@tu-darmstadt.de, yannick.eich@tu-darmstadt.de, matthias.schultheis@tu-darmstadt.de.

Lecture

We will upload the lecture slides on Moodle before the lecture is held. There will be no lecture on April 21 and June 09 due to public holidays.

Theory Exercises

The DM-ML module includes five exercise sessions. Exercise sheets will be released one week before the tutorial session. Solutions will be discussed in person during the tutorials and will be made available on Moodle after the tutorial. We will announce the dates of the sessions in advance, so the dates in TuCAN can be ignored. You may use the public discussion forum if you have questions that are not covered by the solutions or tutorials.

Programming Exercises

The lecture is accompanied by programming exercises to apply concepts discussed in the lecture and theory exercises. The completion of the programming exercises will contribute to the bonus. More details on the bonus grade are given below. The bonus improves the mark of the final exam **one third (0.3/0.4)**. However, it can not convert a failing grade to a pass.

There will be five programming exercises in total. The students will be assigned specific problems and have a week to hand in their solutions. The students can achieve up to 100 (5x20) points. Note that it is sufficient to achieve 60 points to get the bonus. The code must be written in Python. More information will be provided in the first exercise sheet, which will be uploaded after the first theory exercise.

Participation in the bonus grade is not compulsory but strongly suggested to gain hands-on experience in the subject. Students are highly recommended to work on the bonus tasks in groups of 2. The group registration form on Moodle will be released on April 28.

Exam

The final exam is currently scheduled for Thursday, July 24, 2025 from 14:30 to 17:30, to be held **on-site**. It is a closed-book written exam. You may bring a non-programmable calculator. Please check the announcement forum for current updates.