REN[PRO] Method Course

Prof. Dr. Merle Behr and Dr. Kata Vuk (Universität Regensburg): Machine learning for beginners

Date:	**May 27 – 28, 2026**
Place:	Universität Regensburg, Faculty of Informatics and Data Science (FIDS), Bajuwarenstraße 4, 93053 Regensburg, Room BA.621
Target group:	PhD students of the TRR 374, open for medical doctoral students, PostDocs and Clinician Scientists in the TRR 374, and for interested doctoral students (via the graduate schools)
Credit Points:	Full participation can be counted as a method course with 0.6 CPs within the Curriculum of the Graduate Schools (RIGel, BioMediGS, life@FAU)

Maximum number of participants: 20 (TRR members will be given priority when allocating places)

Registration: by March 23, 2026

via the following link (password-protected form):
https://terminplaner6.dfn.de/b/6b5b8485cc4f6f88b8cf567a932ef388-1509017

Non-TRR-members (doctoral students from the graduate schools) please register informally by email to: michaela.kritzenberger@ur.de

Please note: Course places will be given preferentially to TRR members. **You will be informed of your course participation and get the Zoom-Link for the course shortly after the registration deadline**.

Contact: michaela.kritzenberger@ur.de

Contents & Schedule:

Join us for a beginner-friendly short course on machine learning. This course will cover fundamental concepts of regression and classification in supervised learning, including multiple regression and k-nearest neighbors, along with key principles such as training-testing split, bias-variance trade-off, least squares optimization, and numerical minimization using gradient descent. Through hands-on sessions using Jupyter Notebooks, participants will gain practical experience in data analysis without requiring prior programming knowledge. The course emphasizes the universal applicability of machine learning across diverse contexts, enabling participants to understand data patterns with minimal prior knowledge. Participants are asked to bring their laptops. If you do not have your own laptop, please let me know, we have some laptops and while examples from kidney research will be highlighted, the concepts and methods covered are broadly applicable to various data problems beyond the biomedical domain.

Wednesday, May 27 2026		
10:00h - 10:30h	**Welcome**	BA.621 (FIDS)
10:30h - 12:00h	**Interactive ML Session I**	BA.621 (FIDS)
12:00h - 13:30h	**Lunch Break & Discussion**	
13:30h - 15:00h	**Interactive ML Session II**	BA.621 (FIDS)
15:00h - 15:30h	**Coffee break & Discussion**	BA.621 (FIDS)
15:30h - 17:00h	**Interactive ML Session III**	BA.621 (FIDS)

Tuesday, May 28 2026		
8:30h - 10:00h	**Interactive ML Session IV**	BA.621 (FIDS)
10:00h - 10:30h	**Coffee break & Discussion**	
10:30h - 12:00h	**Interactive ML Session V**	BA.621 (FIDS)
12:00h - 13:00h	**Lunch break**	
13:00h - 14:30h	**Interactive ML Session VI**	BA.621 (FIDS)
14:30h - 14:45h	**Coffee break & Discussion**	
14:45h - 16:15h	**Interactive ML Session VII**	BA.621 (FIDS)