

## Terminplan CAS Machine Learning for Software Engineers 2025 - 2026 (MLS)

Datum	von	bis	Lekt	Install Party	Inhalt	Dozierende	Ort
Do. 06.03.2025	17:15	18:00	1	Intro, ML Primer, Install Party	Begrüssung, Administrative Fragen, Curriculum	Martin Stypinkski	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Do. 06.03.2025	18:18	19:00	1	Intro, ML Primer, Install Party	Bare Basics, Concepts, Supervised, Unsupervised, Features	Martin Stypinkski	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Do. 06.03.2025	19:15	21:15	2	Intro, ML Primer, Install Party	Installation der Software, Lab Walk	Martin Stypinkski	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Di. 11.03.2025	17:15	21:15	4	Python Einführung & Übung		Michael Inden	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Do. 13.03.2025	17:15	21:15	4	Python Einführung & Übung		Michael Inden	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Di. 18.03.2025					Phyton & Frameworks		Selbststudium
Do. 20.03.2025	17:15	21:15	4	Python Einführung & Übung		Michael Inden	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Di. 25.03.2025	17:15	21:15	4	Intro to Vector Analysis	Vektorrechnung, L1, L2, Norm, Schwerpunkt	Oliver Augenstein	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Do. 27.03.2025	17:15	19:00	2	Einführung Frameworks	Numpy, Pandas - Datenabend	Christian Fässler	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Do. 27.03.2025	19:15	21:15	2	Einführung Frameworks	SciPy, Matplotlib - Visualisierungsabend	Christian Fässler	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Di. 01.04.2025	17:15	21:15	4	Einführung Frameworks	SciKit Learn - Klassische Framework	Christian Fässler	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Do. 03.04.2025	17:15	21:15	4	Ai as a Service	Bauen einer AI Applikation	Marco Lehmann	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Di. 08.04.2025	17:15	21:15	4	Exploratory Data Analysis	Daten visualisieren, Daten sichten	Christian Fässler	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Do. 10.04.2025	17:15	19:00	2	Fundamentals of Learning	Motivation, Was ist Machine Learning?	Martin Stypinkski	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Do. 10.04.2025	19:15	21:15	2	Fundamentals of Learning	Model Validation, Training / Testset, Cross-Validation	Martin Stypinkski	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Di. 15.04.2025	17:15	19:00	2	Fundamentals of Learning	IID Assumption, ROC Curve, AUC, Recall	Martin Stypinkski	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Di. 15.04.2025	19:15	21:15	2	Fundamentals of Learning	Day & Night Image Classification, Threshold Based Model, Random Forest	Martin Stypinkski	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Di. 22.04.2025	17:15	21:15	4	Non-Parametric Models	KNN Anwendung, z.B. Dataset 'unsupervised Clustern'	Christian Fässler	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Do. 24.04.2025	17:15	21:15	4	Clustering	Introduction to Clustering (Kmeans, Kmeans++, Hierarchical Clustering)	Christian Fässler	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Di. 29.04.2025	17:15	19:00	2	Clustering	Dichte / (Norm, I1, I2 ggf.)	Oliver Augenstein	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Di. 29.04.2025	19:15	21:15	2	Clustering	DBScan	Oliver Augenstein	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Do. 01.05.2025	17:15	21:15	4	Statistik	Ereignisse, Wahrscheinlichkeiten, Bayes	Oliver Augenstein	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Di. 06.05.2025	17:15	21:15	4	Statistik & Bayes	SKLearn Notebook bearbeiten, SKLearn Implementierung, z.B. Spam Filter	Marco Lehmann	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Do. 08.05.2025	17:15	21:15	4	Statistik	Wahrscheinlichkeitsdichten, Maximum Likelihood	Oliver Augenstein	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Di. 13.05.2025	17:15	21:15	4	Linear Regression	Linear Regression, Bias Variance Trade-Off, Regularisation	Oliver Augenstein	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Do. 15.05.2025	17:15	21:15	4	Logistics Regression	Regularisation (recap), Logistics Regression	Marco Lehmann	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Di. 20.05.2025	17:15	19:00	2	Normalisation / PCA	Normalisation, Feature Scaling	Marco Lehmann	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Do. 22.05.2025	19:15	21:15	2	Normalisation / PCA	PCA	Marco Lehmann	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Di. 27.05.2025	17:15	19:00	2	Dimentionality Reduction / Recommender	Low rank matrix factorisation	Ursin Brunner	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Di. 27.05.2025	19:15	21:15	2	Dimentionality Reduction / Recommender	eg. Netflix Database	Ursin Brunner	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Di. 03.06.2025	17:15	21:15	4	Ensemble Methods	Boosting, Adaboost, Bagging, Bucket of Models	Martin Stypinkski	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Do. 05.06.2025	17:15	19:00	2	Feature Engineering & Selection	Understanding Features Dimensionality Reduction	Martin Stypinkski	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Do. 05.06.2025	19:15	21:15	2	Date Hack Preperation	How to handle a Datat Project?	Martin Stypinkski	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
<b>Sa. 14.06.2025</b>	<b>09:00</b>	<b>17:00</b>	<b>8</b>	<b>Data Hack</b>	<b>Small Data Hacking Competition</b>	<b>Martin Stypinkski</b>	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Di. 17.06.2025	17:15	19:00	2	Recap	Recap, Q&A Session for Math Fundamentals	Oliver Augenstein	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Di. 17.06.2025	19:15	21:15	2	Recap	General Q&A Session	Martin Stypinkski	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Do. 19.06.2025					Reservetag		
Di. 24.06.2025					Reservetag		
Do. 26.06.2025	17:15	19:00	2	Mid-Term Exam I	Till "End of ML Methods"	Martin Stypinkski	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Do. 26.06.2025	20:15	21:15	2		Kick-off ML Projekt	Martin Stypinkski	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Di. 19.08.2025	17:15	21:15	4		Hands-on Black Box Application, z.B. Fashion-MNIST	Martin Stypinkski	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Do. 21.08.2025	17:15	21:15	4	Einführung Frameworks	Pytorch - Deep Learning, MNIST	Christian Fässler	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Di. 26.08.2025	17:15	21:15	4	Intro to Deep Learning	Termination Layer, Cost Function Recap, Gradient Descent, Momentum	Oliver Augenstein	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Do. 28.08.2025	17:15	21:15	4		Drop Out, Batch Normalisation, Batch Size, Data Augmentation	Martin Stypinkski	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Di. 02.09.2025	17:15	21:15	4	Intro to Deep Learning II		Oliver Augenstein	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Do. 04.09.2025	17:15	21:15	4		Binary, Multi-Class, One-To.Many, One-To-One	Martin Stypinkski	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Di. 09.09.2025	17:15	21:15	4		Input Handling, Output Handling, Metriken, Weights and Biases	Martin Stypinkski	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Do. 11.09.2025					Reservetag		
Di. 16.09.2025	17:15	21:15	4	Birds Eye View	Überblick, Pipelining (training, testing)	Ursin Brunner	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Do. 18.09.2025	17:15	21:15	4	Deployment and Operations	Deployment Google, AWS, On-Prem / On Prem Training, Google Collab Onboardin	Ursin Brunner	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>

Di.	23.09.2025	17:15	21:15	4	Deployment and Operations		Ursin Brunner	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Do.	25.09.2025	17:15	21:15	4	Advanced Topics	Transformer Architectures, tbd	Ursin Brunner	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Di.	21.10.2025	17:15	21:15	4		Software Architecture, System Architecture	Ursin Brunner	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Do.	23.10.2025	17:15	21:15	4		Building Pipelines and Deploying for Training, Inference (Production)	Ursin Brunner	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Di.	28.10.2025	17:15	19:00	2	Mid-Term Exam II		Martin Stypinski	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Di.	28.10.2025	19:15	21:15	2	Machine Learning Project: Mini Pitch	Pitch Ideas and Concepts - What do you want to solve?	Martin Stypinski	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Do.	30.10.2025	17:15	21:15	4	Reinforcement Learning		Peter Dürr	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Di.	04.11.2025	17:15	20:00	3	Reinforcement Learning		Peter Dürr	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Di.	04.11.2025	20:15	21:15	1	Reinforcement Learning	Showcase: Sony AI	Peter Dürr	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Do.	06.11.2025	17:15	21:15	4	Autoencoding, GAN	Self-Supervised Learning	Mitra Purandare	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Di.	11.11.2025	17:15	21:15	4	Autoencoding, GAN	Contrastive Learning	Mitra Purandare	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Do.	13.11.2025	17:15	21:15	4	Recursive Neuronal Networks (RNN)	LSTM, GRU, Machine Translation, Transforming Architecture, Text Voice	Ursin Brunner	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Di.	18.11.2025	17:15	21:15	4	Recursive Neuronal Networks (RNN)	LSTM, GRU, Machine Translation, Transforming Architecture, Text Voice	Ursin Brunner	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Do.	20.11.2025	17:15	21:15	4	CNN	Convolutional Neuronal Networks	Martin Stypinski	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Di.	25.11.2025	17:15	21:15	4	CNN	Convolutional Neuronal Networks	Martin Stypinski	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Di.	09.12.2025	17:15	19:00	2	Final Exam		Martin Stypinski	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Di.	09.12.2025	19:15	21:15	2	User & Artificial Intelligence		Sibylle Peuker	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Do.	11.12.2025	17:15	19:00	2	Showcase: SevenSence		Marcin Dymczyk	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Do.	11.12.2025	19:15	21:15	2	ML Projekt	Besprechung Fortschritt, Hinweise wo Prioritäten setzen	Martin Stypinski	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Do.	08.01.2026	17:15	21:00	4	ML Projekt	Präsentationen	Martin Stypinski	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Fr.	23.01.2026	17:15	19:00	2	Retro	Was war gut, was nicht?	Martin Stypinski	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>
Fr.	23.01.2026	19:15	21:15	2	Abschluss	Diplom Übergabe & Apéro	Martin Stypinski	<a href="#">Campus Rapperswil, Oberseestrasse 10, Rapperswil-Jona</a>

(Änderungen vorbehalten)  
 Stand: 20.08.2024\_CHUY

#### Unterrichtszeiten

Ein Präsenztag entspricht 8 Lektionen à 45 Min., inkl. einer Mittagspause von 45 bis 60 Min. sowie je 15 Min. Pause am Vor- und Nachmittag.

#### Studienkoordinatorin

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