

## Introduction Course on Machine Learning

Organizer: School of Medical Sciences,

University of Örebro (ORU)

15 April 2026

Online

Time	Title	Speaker/Participant
10:00– 11:00	<b>Basic concept of machine learning (ML), I part</b> <ul style="list-style-type: none"><li>• What is ML</li><li>• ML pipeline</li><li>• Core concept of ML</li></ul>	Henrique Ribeiro, ORU
11:00 – 11:15	Coffee break	
11:15– 12:15	<b>Basic concept of machine learning (ML), II part</b> <ul style="list-style-type: none"><li>• What is ML</li><li>• ML pipeline</li><li>• Core concept of ML</li></ul>	Henrique Ribeiro, ORU
12:15 – 12:30	Coffee break	
12:30 – 13:30	<b>ML tools and algorithms, I part</b> <ul style="list-style-type: none"><li>• Supervised learning approaches</li><li>• Unsupervised learning approaches</li><li>• Model validation and quality control</li></ul>	Henrique Ribeiro, Shashank Gupta, ORU
13:30– 14:30	Lunch break	
14:30 – 15:30	<b>ML tools and algorithms, II part</b> <ul style="list-style-type: none"><li>• Supervised learning approaches</li><li>• Unsupervised learning approaches</li><li>• Model validation and quality control</li></ul>	Henrique Ribeiro, Shashank Gupta, ORU

16 April 2026  
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Time	Title	Speaker/Participant
10:00 – 11:00	<b>Applications of ML in biomedical research, I part</b> Examples from multi-omics/systems biology research	Matej Orešič, ORU
11:00 – 11:15	Coffee break	
11:15 – 12:15	<b>Applications of ML in biomedical research, II part</b> Examples from multi-omics/systems biology research	Matej Orešič, ORU
12:15 – 12:30	Coffee break	
12:30 – 13:30	<b>Hands-on session using ML tools and datasets from MetaboAnalyst</b>	Henrique Ribeiro, ORU
13:30 – 14:30	Lunch break	
14:30 – 15:30	<b>Hands-on session using ML tools and datasets from MetaboAnalyst</b>	Henrique Ribeiro, ORU
15:30 - 15:45	Closing remarks	