



Day 1

Introduction to microbiome and the MiaVerse

08:30 Doors opening and set-up

09:00 Welcome and program overview

09:15 **Microbiome biology and concept**

Instructor: Dr. Aldert Zomer

10:15 Coffee break

10:30 **Statistical specificities of Microbiome data**

Instructor: Dr. Alise Ponsero

11:15 **Introduction to statistical analysis of microbiomes**

Instructor: Dr. Eliana Ibrahimi

12:15 **Introduction to Miaverse - Theory**

Instructor: Dr. Rajesh Shigdel

13:15 Lunch

14:15 **Introduction to Miaverse - Practical**

Instructor: Dr. Rajesh Shigdel & Dr. Matti Ruuskanen

15:00 Coffee break

15:30 **Introduction to compositional data analysis**

Instructor: Dr. Alise Ponsero

16:15 **Working in the MiaVerse**

Instructor: Dr. Rajesh Shigdel & Dr. Matti Ruuskanen

17:15 Closing words

COMMON DINNER

Restaurant De Beurs

Neude 37-39, 3512 AG Utrecht

<https://www.debeursutrecht.nl>



Day 2

Introduction to unsupervised ML

08:30 Doors opening and set-up

09:00 **Unsupervised approaches**

Instructor: Dr. Matti Ruuskanen

10:15 Coffee break

10:30 **Hands on session unsupervised learning
dimensionality reduction and clustering**

Instructor: Dr. Rajesh Shigdel & Dr. Matti Ruuskanen

12:00 Lunch - The basket

14:00 **Hands on session unsupervised learning
dimensionality reduction and clustering**

Instructor: Dr. Rajesh Shigdel & Dr. Matti Ruuskanen

15:00 Coffee break

15:10 **Hands on session unsupervised learning
analysis and interpretation**

Instructor: Dr. Rajesh Shigdel & Dr. Matti Ruuskanen

17:15 Closing words



Day 3

Introduction to supervised ML

08:30 Doors opening and set-up

09:00 **Supervised approaches**

Instructor: Dr. Matti Ruuskanen

10:15 Coffee break

10:30 **Methods and Model Quality Assessment**

Instructor: Dr. Matti Ruuskanen

11:30 **Hands on session unsupervised learning**

Instructor: Dr. Aleksandra Gruca

13:00 Lunch

14:15 **Hands on session unsupervised learning**

Instructor: Dr. Aleksandra Gruca

15:00 Coffee break

15:15 **Hands on session unsupervised learning**

Instructor: Dr. Aleksandra Gruca

16:45 Closing words

ML4Microbiome Training school 2023

ML4Microbiome

Training school 2023



Utrecht University



MICROBIOME

DATES:

6, 7 and 8th March 2023

VENUE:

Utrecht University – Androclus building
Yalelaan 1, 3984 CL, Utrecht
C.139 (first floor)

DIRECTIONS:

Tram Line 22, station “Uithof”

ORGANIZERS

Aldert Zomer Utrecht University, Netherlands

Eliana Ibrahimi University of Tirana, Albania

Alise Ponsero University of Helsinki, Finland

Matti Ruuskanen University of Turku, Finland

Rajesh Shigdel University of Bergen, Norway

Aleksandra Gruca Silesian University of Technology, Poland

Domenica D’Elia Institute for Biomedical Technologies, Italy

Marcus Claesson APC Microbiome Ireland, University College Cork, Ireland