Organization

Venue
The courses may take place in parts or as a whole online (virtual conferences) if in-classroom teaching is not possible.

Registration
Deadline for registration is October 21, 2021.

Course fee
The fee for the course is € 645; discounted rate for affiliated with a university € 430.

Cancellation
The cancellation policy is as follows: 100% refund for cancellations till October 27; 75% refund for cancellations between October 28 and November 3; no refund for cancellations after November 4, 2021.

Attendee substitutes may be made at any time.

Information
http://www.biometrie.uni-heidelberg.de/datascience

Concept and Contents
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Organization
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Regression Methods

Aims

Course participants will be able to:
- Understand linear regression and its extensions
- Know the limitations of these procedures
- Use resampling models and evaluate regression models
- Apply these methods in R

Course content

The course will cover following topics:
- Linear models and generalized linear models
- Resampling methods (Bootstrap, jackknife, cross-validation) including selected model evaluation measures
- Mixed models for dependent data
- Techniques of survival analysis
- Implementation in R

Pre-requisites

The participants must have
- Basic knowledge of statistics, linear algebra, and probability theory
- Basic knowledge in R (data manipulation base R/tidyverse)

Schedule (subject to change)

Thursday (11th of November)
9:00 – 10:30  Linear Regression I
11:00 – 12:30  Linear Regression II
13:30 – 15:00  Generalized Linear Models I
15:30 – 17:00  Generalized Linear Models II

Friday (12th of November)
9:00 – 10:30  Survival Analysis I
11:00 – 12:30  Survival Analysis II
13:30 – 15:00  Mixed Models I
15:30 – 17:00  Mixed Models II

Saturday (13th of November)
9:00 – 10:30  Resampling Methods I
11:00 – 12:30  Resampling Methods II

All parts include practical exercises. Please preinstall R Studio.

Number of Participants

The number of participants is limited to 25 per course.

Course instructors

Maximilian Pilz M.Sc., IMBI Heidelberg

Further lecturers

Dr. Johannes Krisam, IMBI Heidelberg
Dr. Dorothea Kronsteiner, IMBI Heidelberg

Basic reading
