The course will take place in Heidelberg at the University Campus ‘Im Neuenheimer Feld’.

Deadline for registration is October 24, 2019.

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

The cancellation policy is as follows, 75% refund for cancellations after October 31, no refund for cancellations after November 7, 2019.

Attendee substitutes may be made at any time.

Costs and schedule: www.vrn.de

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

Concept and Contents
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Regression Methods
14.11. - 16.11.19

Medical Data Science
Aims
Course participants will be able to:
- Understand linear regression and its extensions
- Know the limitations of these procedures
- Evaluate different models
- Know techniques for variable/model selection
- Apply these methods in R

Pre-requisites
The participants must have
- Basic knowledge of statistics and probability theory
- Basic knowledge in R

Course content
The course will cover following topics:
- Linear and nonlinear regression (exponential family, link function)
- Variable or model selection methods (Subset selection, forward, backward, and stepwise selection)
- Model evaluation (Akaike/Bayesian Information Criterion (AIC, BIC), Deviance, Mellow' Cp, Mean squared error, Brier Score)
- Resampling methods (Bootstrapping, jackknife, cross-validation)
- Implementation in R

Schedule
Thursday
9:00 – 10:30 Linear Regression I
11:00- 12:30 Linear Regression II
13:30-15:00 Model Evaluation
15:30-17:00 Resampling Methods

Friday
9:00 – 10:30 Generalized Linear Models I
11:00- 12:30 Generalized Linear Models II
13:30-15:00 Variable Selection
15:30-17:00 Mixed Models

Saturday
9:00 – 10:30 Survival Analysis I
11:00- 12:30 Survival Analysis II

Number of Participants
The number of participants is limited to 20 per course.

Course instructors
Maximilian Pilz, IMBI Heidelberg
Dorothea Weber, IMBI Heidelberg

Further lecturers
Samuel Kilian, IMBI Heidelberg
Dr. Johannes Krisam, IMBI Heidelberg

Further reading