Seminar in Business Analytics:
Webcrawler Design and Data Mining

Summer Term 2018

Course Description:

Prior to the start of the Information Age in the late 20th century, companies were forced to collect data from non-automated sources manually. Companies back then lacked the computing capabilities necessary for data to be analyzed, and as a result, decisions primarily originated not from knowledge but from intuition. With the emergence of ubiquitous computing technology, company decisions nowadays rely strongly on computer-aided “Data Mining”.

In this seminar, students will acquire two kinds of skills. First, students will learn to build a webcrawler to collect their own dataset from the web. Second, students will review different strategies for data analysis, and data visualization. Students are asked to describe and visualize the content of their dataset. Optionally, committed students can pick a statistical method / data mining algorithm of their choice and perform a descriptive or predictive data mining task on their dataset.

Basic programming skills are recommended (preferably, you will work in R and/or Python). For students who are less familiar to programming, it is also possible to work with a precollected dataset and focus on the data mining part. Please indicate in your application if you would prefer this setup. Please also indicate your level of programming expertise.

Among others, we will cover material from the following books:


Target Group:

This Seminar specifically addresses students all IMP disciplines, as well as in the M.Sc. Economics and M.Sc. VWL programs. Interested and committed B.Sc. VWL and BWL students may also participate.
Organization:
Registration: from March 1, 2018 to April 18, 2018

Application via email to gunther.gust@is.uni-freiburg.de with the following details:

- First name, last name
- Matriculation number (Matrikelnummer)
- Email, phone number
- Study program, semester
- Transcript of records (Leistungsübersicht)
- Level of programming expertise (beginner, intermediate, advanced)
- Curriculum Vitae (optional)

Response whether application was successful will be sent out shortly after the registration deadline.

First meeting: **April 23, 2018 at 14ct**
Room 2330

Paper draft due: June 25, 2018
Final presentation: July 2, 2018
Final paper due: August 31, 2018

Communication:
All announcements, handouts, etc. will be sent via email.

Topics:
Exact topics along with hints on literature will be announced together with the response to your application.
Policies and Procedures:

Grading: Draft of seminar paper (33%), presentation (33%), final paper (about 10 to 15 pages, 33%). In addition, you have to hand in your programming code (if applicable). The grading will take into account the study level (Bachelor/Master) of the individual participant.

Credit points: 4 for Bachelor, 6 for Master
Study program will be considered in topic assignment

Applicable to: B.Sc. BWL PNPM: Allgemeine BWL
B.Sc. VWL: BWL, Wirtschaftsinformatik
M.Sc. BWL PNPM: Allgemeine BWL, Wirtschaftsinformatik
M.Sc. VWL (2011): BWL, Wirtschaftsinformatik
M.Sc. VWL (2014): Business Analytics
M.Sc. Economics: Elective in Information Systems and Network Economics profile
M.Sc. Computer Science: Wahlmodule BWL und VWL

Communication:
All announcements, handouts, etc. will be sent via email.