

Syllabus

R Skills

- **Instructor:** Gergely Daroczi
- **Credits:** 1 (2 ECTS)
- **Term:** Fall, 2018-2019
- **Course level:** MA/MS
- **Prerequisites:** Mathematics and Informatics Pre-session for Business Analytics; Data Analysis 1: Exploration – Business Analytics track
- **Course drop:** Course can be dropped free of charge 24 hours after the first session. After this date drop is possible until the course is halfway over (late drop fee applies). No changes are allowed past that date.

Course description

This course builds on and extends the introductory-level R coding skills acquired in the “Data Analysis 1 – Business Analytics track” seminars -- introducing new topics, methods and approaches, such as writing loops and functions in R, working with time-series, spatial and textual data, working with external data sources and creating reports and dashboards in R.

Reading list

Class materials will be available on GitHub.

Assessment (including minimum pass requirement)

- Weekly homeworks (50%)
- Final take-home assignment (50%)

To pass, students will need to get at least 50% of the overall grade AND at least 50% of the final take-home assignment. Failure to do so, will yield a Fail grade.

Technical/laptop requirement

Students need to use their laptops (with R and RStudio installed) in the class and for homeworks.

Course schedule and materials for each session

1. Handling repetitive tasks in R: loops and functions
2. External data sources: Excel, databases, web APIs
3. Parsing text, introduction to regular expressions
4. Analyzing time-series
5. Loading, merging and visualizing spatial data
6. Creating reports and dashboards with rmarkdown and Shiny

Short bio of the instructor

Gergely Daróczi is an enthusiast R user and package developer, Ph.D. in Sociology, former assistant professor and founder/CTO of an R-based web reporting application at rapporter.net, ex Lead R Developer & Research Data Scientist, then Director of Analytics at CARD.com, currently working as the Senior Director of Data Operations at System1 with a strong interest in designing a scalable data platform built on the top of R, AWS and various APIs. He maintains some CRAN packages mainly dealing with reporting and API integrations, co-authored a number of journal articles in social and medical sciences, and wrote a book on "Mastering Data Analysis with R".