

## LAB 1. LINEAR REGRESSION

PLEASE, READ THE INSTRUCTIONS CAREFULLY!

Database Germany (from LM3 .RData) contains information about the amount of alcohol consumed by German respondents on weekdays and weekends. The data has the following variables:

alcwkdyn – grams of alcohol consumed on weekdays

alcwkndn – grams of alcohol consumed on weekends

eduyrsn – number of years of education

gndr – gender of the respondent

incdec – income decile of the respondent (self-placement)

age – age in years

### Tasks

1. Specify two models to predict the amount of alcohol consumed on weekends and weekdays by the respondents' education, gender, income, and age. Please, use the log of the amount of alcohol. Interpret the results (coefficients,  $R^2$ ).
2. Estimate the interaction terms between gender and education and between income and age in both models. Interpret the results.
3. Visualize the estimated interaction terms and comment on the results.

The file with code and interpretations should be sent to [vikorsunova@gmail.com](mailto:vikorsunova@gmail.com) by 21:10 (January, 15).