

Introduction and advanced topics in R

Workshop overview

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Outline

Mon: **Introduction**

Working with data
Calculations and help

Tue: **Oracle queries**

ROracle and ROracleUI
Hafro database

Thu: **Advanced graphics**

Plot types
High-quality plots

Fri: **The geo package**

Basics
In depth

Website

<http://www.hafro.is/~arnima/r/workshop/>

Download slides, handouts, and datasets

Teaching material

Slides

Top bar shows where we are

Handouts

Same content as the slides, but different format

Example datasets

Mostly from the R package **datasets**

Create workshop folder

Create a folder to work with example datasets:

Windows `c:/shop`

Linux `~/shop`

Learning R

Large systems: Emacs, L^AT_EX, R

> 1000 core functions, many optional packages

Users can write their own functions

Created in the 1970s; will be around for many years

Free software

Takes more than a few days to learn well

Day 1

Demonstrate simple data analysis (road map)

Learn how to learn R

- Take notes as you go (e.g. in Word)
- Learn the help system
- Start with tutorials
- Use it in your work

Day 1

- 1 Workshop overview
- 2 Statistical computing
- 3 Demo session
- 4 Statistical analysis - significance tests, linear models
- 5 Simple plots - types, details
- 6 Working with data - input/output, objects, manipulation
- 7 Using R - projects, packages, editors, help
- 8 Road map

Days 2–4

Study the details of

- Oracle queries in R
- advanced graphics
- the **geo** package