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

1 Material

Website

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

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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`

2 Objectives

Learning R

Large systems: Emacs, LATEX, 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