

US EPA Region 7 Introduction to R Workshop

This repository contains materials for an R workshop for USEPA Region 7 New England Regional Staff. The workshop will provide attendees with an introduction to the R Language for statistical computing and will cover the following topics:

- R Syntax
- Packages
- Data Types and Data Structures
- Reading in external data
- Data Manipulation
- Data Aggregation
- Data Visualization
- Exploratory Data Analysis

The goal of this workshop is to provide a solid basis for further learning in R and will focus on the language, data management, and visualization. While we will cover some basic data analysis, the focus will not be on statistics and modelling. Participants will gain familiarity with syntax, data structures, and several popular packages including `dplyr`, `tidyr`, and `ggplot2`.

Tentative Workshop Schedule

Day 1	Topic
8:30 AM - 9:15 AM	Welcome, Introductions, and Motivation
9:15 AM - 10:45 AM	R Basics (pdf)
10:45 PM - 11:00 AM	<i>BREAK</i>
11:00 AM - 12:30 PM	Data in R (pdf)
12:30 PM - 1:00 PM	<i>LUNCH</i>
1:00 PM - 2:30 PM	Data manipulation (pdf)
2:30 PM - 2:45 PM	<i>BREAK</i>
2:45 PM - 4:00 PM	Data aggregation (pdf)

Day 2	Topic
8:30 AM - 10:45 AM	Exploratory Data Analysis (pdf)
10:45 PM - 11:00 AM	<i>BREAK</i>
11:00 AM - 12:30 PM	Data Visualization 1 (pdf)
12:30 PM - 1:00 PM	<i>LUNCH</i>
1:00 PM - 2:30 PM	Data Visualization 2 (pdf)
2:30 PM - 2:45 PM	<i>BREAK</i>
2:45 PM - 4:00 PM	Data analysis basics (pdf)

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