Intro to iteration (for loops and purrr)

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# Overview

Iteration solves many common problems we encounter in data workflows. This tutorial covers the basics of iteration in R, starting with using for loops, their structure, designing your loops for optimal performance, and debugging errors. We also cover the tidyverse package for iteration, purrr, which uses functionals (a tidyverse equivalent to for loops).

## Use cases for iteration

* Problems that iteration solves
* DRY principle

## for loops

* for loop structure (output, sequence, body)
* output
* sequence
* body

## purrr functions

* map() (and variants)
* walk() & walk2()
* pmap(), imap(), etc.

## Worked examples

* Export/import multiple datasets
* Downloading files from the web