UMN EEB Quant/Comp Repo

Table of contents

Hello!

This site/book will serve as a repository for resources related to computational and quantitative workshop held for the University of Minnesota's Ecology, Evolution, and Behavior Graduate Program through its "Friday Noon Seminar" series.

Part I

2023/09/29: Loops, Functions, and the purr package

1 Intro to Iteration

This workshop will be focused on **iteration**, or performing the same code numerous times, potentially on some range of values, in R. It assumes that you know most of the basics of R programming.

R has various ways to iterate, including looping, using functions, and vectorization. We will go over each to some extent, with examples included. We will cover the following:

1. Loops

    1. Types of loops: for, while, and repeat

    2. When to use which types of loops

    3. Potential downsides of using loops

    4. When use a loop is still necessary anyway

2. Functions and Functionals

    1. Benefits of functions

    2. How to write functions

    3. How to iterate functions with th purr package

    4. How to iterate even faster with parallel computing

3. Vectorization

    1. Benefits of vectorization

    2. Limitations