

# Tutorial: Introduction to Rcpp

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**Topic:** This tutorial will provide a hands-on and practical introduction to the **Rcpp** package (and other related packages). The focus will be on simple and straightforward applications of **Rcpp** in order to extend R, or accelerate execution of simple functions.

The tutorial will also introduce the **inline** package which permits embedding of self-contained C, C++ or *Fortran* code in R scripts. We will also cover usage of standard **Rcpp** extension packages such as **RcppArmadillo** for linear algebra, **RcppGSL** for interfacing the GNU GSL via its vector and matrix types, and more.

**Prerequisites:** Knowledge of R as well as general programming knowledge; prior C or C++ knowledge is helpful but not required.

**Equipment:** Users should bring a laptop set up so that R packages can be built. That means on Windows, the **Rtools** bundle needs to be present and working, on OS X the **Xcode** package should be installed, and on Linux things generally just work. We can provide limited assistance in getting the required tools installed but the focus of the tutorial on how to use them.

## References

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