

Introduction to R and Statistics in R

Khoi Trinh

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Introduction to R

- ▶ R is a free software environment for statistical computing and graphics.
- ▶ It is widely used for data analysis, statistics, and machine learning.
- ▶ R was created by Ross Ihaka and Robert Gentleman in 1993.
- ▶ The R community is active and large, with many contributed packages available via CRAN.

Why Use R?

- ▶ Specialized for statistical analysis and visualization.
- ▶ Highly extensible with thousands of user-contributed packages.
- ▶ Integrates well with other programming languages and tools (Python, SQL, etc.).

Setting Up R and RStudio

- ▶ Download R from: <https://cran.r-project.org/>
- ▶ Download RStudio (IDE):
<https://www.rstudio.com/products/rstudio/>

RStudio Overview

- ▶ **Console:** Execute R code interactively.
- ▶ **Environment:** View and manage variables and datasets.
- ▶ **Source Panel:** Write and edit scripts.
- ▶ **Plots:** Visualize your data with charts.