Use of AI Coding Assistants in R Package development

Creating R packages with assistance from Copilot or ChatGPT

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Preface

The world of software development is evolving rapidly, and the use of AI coding assistants is one of the latest developments that has caught the attention of developers worldwide. As an R package developer, you may have heard about the benefits of using AI coding assistants to automate repetitive coding tasks and increase coding efficiency. However, the vast array of available tools and techniques can make it challenging to determine which ones are suitable for your needs and how to integrate them into your development workflow.

This book provides a guide to using AI coding assistants in R package development. We cover different types of assistants, their benefits and drawbacks, and how to use them effectively. You'll learn how to improve your workflow and increase productivity. By the end of the book, you'll have a solid understanding of the potential benefits of using AI coding assistants and how to integrate it into your development workflow. We hope this book inspires you to explore the world of AI coding assistants and build better packages more efficiently.

1 Introduction

1.1 In this book

Whether you are an experienced R package developer looking to improve your workflow, or a data scientist interested in building packages to share your work with others, this book will provide valuable insights into how AI coding assistants can help you build better packages more efficiently.

1.2 Prerequisites

We assume that the reader has prior experience developing R packages and is familiar with the basics of package development, including the use of devtools, usethis, roxygen2, and testthat. Additionally, we assume that the reader has already read R Packages by Hadley Wickham and Jenny Bryan, which provides an excellent introduction to R package development.

Additionally, we assume that the reader has a good understanding of the R language and its ecosystem. This is important to recognize bugs or "hallucinations" generated by ChatGPT.

1.3 What you won't learn

Here are some topics you won't learn about in this book: * Developing your first R package * Creating a large language model like ChatGPT.

1.4 Colophon

This book was created using Quarto. The website is hosted on Github pages and the code is available on Github.

1.5 Ethical considerations

1.6 Disclaimer

Please note that this book was written with assistance of ChatGPT because it's only right that a book on the use of ChatGPT was written some help of ChatGPT.

References