Introduction to GitHub Copilot Workshop

Doug Angus

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Overview

- Introduction to GitHub Copilot
- How it works, its benefits & limitations
- Workshop outline and exercises

What is GitHub Copilot?

- AI-powered code completion tool
- Developed by GitHub and OpenAI
- Built on OpenAI's GPT-3 model
- Provides context-aware code suggestions

How does GitHub Copilot work?

- Uses deep learning and natural language understanding
- Trained on a vast dataset of public code repositories
- Generates code snippets based on the context of the code being written
- Works in various programming languages, including Python and R

Benefits of using GitHub Copilot for coding

- Accelerate coding process by providing relevant code suggestions
- Reduce the need to search for code examples online
- Improve code quality with tested and reviewed suggestions
- Learn new coding techniques and best practices

Limitations and Ethical Considerations

- May not always provide perfect or secure code
- Intellectual property and licensing concerns
- Overreliance on AI-generated code
- Importance of reviewing and understanding the generated code

Setting up GitHub Copilot

- Installing GitHub Copilot for your IDE (Visual Studio Code, JetBrains, etc.)
- Activating GitHub Copilot in your coding environment

Getting Started with GitHub Copilot

- Begin typing code or comments to receive suggestions
- Accept, modify, or reject suggestions as needed
- Use GitHub Copilot to generate code snippets in the workshop exercises

Workshop Exercises

- Exercise 1: Using GitHub Copilot to load and explore data (your own, or from a public dataset)
- Exercise 2: Using GitHub Copilot to create a plot
- Exercise 3: Using GitHub Copilot to create a function
- Exercise 4: Using GitHub Copilot to create a loop