



GitHub Fundamentals

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(••) GITHUB COPILOT

Using GitHub Copilot Chat

Published by [O'Reilly Media, Inc.](#)

  Intermediate

Pair programming with AI for easier software development

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Course outcomes

- Understand how to use GitHub Copilot Chat to refactor, document, and secure your code base
- Learn how to generate unit test cases, analyze diagrams and algorithms, and perform code reviews

Course description

Recent advancements in large language models, with ChatGPT at the forefront, are revolutionizing how software developers work. GitHub Copilot has been trained on billions of lines of code to turn coding prompts into coding suggestions. Recently, it has been extended with Chat, a generative AI and GPT-4 context-aware conversational assistant in Visual Studio Code.

Join expert Lukasz Dynowski to gain practical skills that will enable you to turn dull development tasks such as unit testing, documentation, bug hunting, documentation searching, or diagram explanations into playful conversation with GitHub Copilot Chat, your new AI pair programmer.

Jan. 22, 2024

7 – 9 p.m. Central European Standard Time

180 Spots Remaining

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YOUR INSTRUCTOR



Lukasz Dynowski

Lukasz Dynowski is an independent consultant who in his career was involved in over 150+ projects. Counting over 10 years of experience as a software engineer Lukasz was doing Full-Stack, DevOps, Software Architecture, as well as...

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Objectives

Pull Requests	CI/CD
GitHub Templates	Docker
GitHub Releases / Tag	Git
GitHub Wikis	Markdown
GitHub Pages	Microservices
GitHub Actions	Free Software
GitHub Issues	Open Source
GitHub Advanced Search	GitHub is your CV





GitHub in Numbers



126M+ Developers



420M+ / 284M+ Repositories



3M+ Organizations



90% Fortune 50





How did we arrived here?

Unix	1970	AT&T Bell Labs
GNU	1983	GNU Project
GCC	1987	GCC + Libs
GPL	1989	4 Freedoms
Linux Kernel	1991	Linux Kernel
Open Source	1998	Netscape
GIT	2005	BitKeeper
GitHub	2008	Logical Awesome LLC
	2021	



Free Software & Open Source



Richard Stallman



Bruce Perens



Eric Raymond





What does “**free software**” mean?

User has freedom to:

- **Run** the program as you wish, for any purpose.
- **Study** how the program works and change it, so it does your computing as you wish.
- **Redistribute** copies so you can help others.
- **Distribute** copies of your modified versions to others.

Access to the source code is a precondition for this!

<https://www.gnu.org/philosophy/free-sw.en.html>





What does “**open source**” mean?

The software is:

- **Redistributed** for free.
- The source code should be **publicly available**.
- The software can be **modified and distributed** in a different format from the original software.
- The software should **not discriminate against persons or groups**.
- The software should **not restrict the usage of other software**.

<https://opensource.org/osd>





Free software **vs** Open source

Free Software

Social movement.

Free software focus on the user's freedom to use the program, to modify it, and to share it.



Open source

Open source is a development methodology.

Open-source focus on the availability of the source code and the ability to modify and share it.





Is Public repository open source?

Public \neq Open Source

Anyone can view and fork your public project, but your work comes with no permissions.

What if you don't apply an open source license?

Everybody who contributes to your project also **becomes an exclusive copyright holder of their work**. That means **nobody can use, copy, distribute, or modify their contributions** – and that “nobody” includes **you**.

If you want others to use, distribute, modify, or contribute back to your project, you need to include an open source license.





What is a software license?

An open source license is a legal contract between the author of the software and the user of a software. An open source license states what the user is permitted to do with the software, their obligations, and what they cannot do.





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Etc.

200+

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Example	CC*, WTFPL	Apache, MIT, BSD	GPL, AGPL	JRL, AFPL	Copyrights, no public license	
Users	< 1%	Kubernetes, GitLab	Linux Kernel, Gimp			





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<https://choosealicense.com>

<https://blog.usejournal.com/understanding-open-source-and-free-software-licensing-c0fa600106c9>



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<https://opensource.guide/legal/#what-if-i-want-to-change-the-license-of-my-project>

