



GitHub Fundamentals

Lukasz Dynowski

I_dynowski@yahoo.com

[linkedin.com/in/ldynia](https://www.linkedin.com/in/ldynia)





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



[← VIEW ALL EVENTS](#)

(••) GITHUB COPILOT

Using GitHub Copilot Chat

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

  Intermediate

Pair programming with AI for easier software development

Complete this course and earn a badge! 

[What you'll learn](#) [Is this live event for you?](#) [Schedule](#)

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

[Sign up!](#)

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...

[Read more](#)



Earn your badge

Digital badges are verifiable and shareable proof of the skills you've built. Complete 80% or more of this course to earn your badge.



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 **≠** 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.





What license to choose from?

- 0-clause BSD License (0BSD)
- 1-clause BSD License (BSD-1-Clause)
- 2-clause BSD License (BSD-2-Clause)
- 3-clause BSD License (BSD-3-Clause) <https://choosealicense.com/se>
- Academic Free License 3.0 (AFL-3.0)
- Adaptive Public License (APL-1.0)
- Apache Software License 1.1 (Apache-1.1) (superseded)
- Apache License 2.0 (Apache-2.0)
- Apple Public Source License (APSL-2.0)
- Artistic license 1.0 (Artistic-1.0) (superseded)
- Artistic License 2.0 (Artistic-2.0)
- Attribution Assurance License (AAL)
- Boost Software License (BSL-1.0)
- BSD License: See
 - 3-clause BSD License
 - 2-clause BSD License
 - 1-clause BSD License
 - 0-clause BSD license
 - BSD-3-Clause-LBNL
- BSD+Patent (BSD-2-Clause-Patent)
- CERN Open Hardware Licence Version 2 - Permissive
- CERN Open Hardware Licence Version 2 - Weakly Reciprocal
- CERN Open Hardware Licence Version 2 - Strongly Reciprocal
- CeCILL License 2.1 (CECILL-2.1)
- Common Development and Distribution License 1.0 (CDDL-1.0)
- Common Public Attribution License 1.0 (CPAL-1.0)
- Common Public License 1.0 (CPL-1.0) (superseded)
- Computer Associates Trusted Open Source License 1.1 (CATOSL-1.1)
- Cryptographic Autonomy License v.1.0 (CAL-1.0)
- CUA Office Public License Version 1.0 (CUA-OPL-1.0) (retired)
- Eclipse Public License 1.0 (EPL-1.0) (superseded)

Etc

200+

- Etc.
- Open Software License 3.0 (OSL-3.0)
- OpenLDAP Public License Version 2.8 (OLDAP-2.8)
- OSET Public License version 2.1
- PHP License 3.0 (PHP-3.0) (superseded)
- PHP License 3.01 (PHP-3.01)
- The PostgreSQL License (PostgreSQL)
- Python License (Python-2.0) (overall Python license)
- CNRI Python license (CNRI-Python) (CNRI portion of Python License)
- Q Public License (QPL-1.0)
- RealNetworks Public Source License V1.0 (RPSL-1.0)
- Reciprocal Public License, version 1.1 (RPL-1.1) (superseded)
- Reciprocal Public License 1.5 (RPL-1.5)
- RecoSource Code Public License (RSCPL)
- IL Open Font License 1.1 (OFL-1.1)
- Simple Public License 2.0 (SimPL-2.0)
- Sleepycat License (Sleepycat)
- Sun Industry Standards Source License (SISSL) (retired)
- Sun Public License 1.0 (SPL-1.0)
- Sybase Open Watcom Public License 1.0 (Watcom-1.0)
- Universal Permissive License (UPL)
- University of Illinois/NCSA Open Source License (NCSA)
- Upstream Compatibility License v1.0
- Unicode Data Files and Software License
- The Unlicense
- Vovida Software License v. 1.0 (VSL-1.0)
- W3C License (W3C)
- wxWindows Library License (WXwindows)
- X.Net License (Xnet)
- Zero-Clause BSD (0BSD)
- Zope Public License 2.0 (ZPL-2.0)
- zlib/libpng license (Zlib)





What is a software license?

	Public Domain	Permissive	Copyleft	Noncommercial license	Proprietary	Trade secret
Rules	Grants all rights	Grants use rights, including right to relicense	Grants use rights, forbids proprietyization	Grants rights for noncommercial use only.	No rights granted	No information made public
Example	CC*, WTFPL	Apache, MIT, BSD	GPL, AGPL	JRL, AFPL	Copyrights, no public license	
Users	< 1%	Kubernetes, GitLab	Linux Kernel, Gimp			



🐱 What license to choose from?

<https://choosealicense.com>

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



 Change the license of my project?

CHOOSE WISELY !

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

