



Katja Glass
Consulting

Open Source

Practicalities and the legal side



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Agenda



- Introduction
 - Rights & Limitations
 - Practicalities
 - Examples
 - Summary
-





Introduction

Introduction



Once upon a time ...



'90s



Introduction



Once upon a time ...



'90s



Introduction



Personal homepages

'90s

A screenshot of a personal homepage from the 1990s. The page has a light blue background and a green header bar. The header bar contains four navigation links: [Katja, wie sie leibt und lebt.](#), [Tiere sind doch süß!](#), [Das unendliche Meer](#), and [Katja on Tour.](#) The main content area features the title **Das unendliche MEER.** followed by a paragraph of text: "Das Meer ist das Schönste, was die Welt je hervorgebracht hat. Mit all seinen kleinen Wundern. Schon mal was vom Riesenoktopus gehört? Ist doch toll, was für riesige Giganten sich auf unserer kleinen Erde tummeln. Wasser an sich ist ja sowieso ein schönes Element. Wenn es denn auch noch schön klar ist. Und dann sind da ja noch diese schönen Wellen." Below the text is a photograph of a rocky coastline with waves crashing against the shore.

[Katja, wie sie leibt und lebt.](#) [Tiere sind doch süß!](#) [Das unendliche Meer](#) [Katja on Tour.](#)

Das unendliche MEER.

Das Meer ist das Schönste, was die Welt je hervorgebracht hat. Mit all seinen kleinen Wundern. Schon mal was vom Riesenoktopus gehört? Ist doch toll, was für riesige Giganten sich auf unserer kleinen Erde tummeln. Wasser an sich ist ja sowieso ein schönes Element. Wenn es denn auch noch schön klar ist. Und dann sind da ja noch diese schönen Wellen.



Introduction



Astonishment, information sharing, images

- Access to information
- Access to images
- Use them!

'90s



Introduction



Legal Claims

➤ Copyright

Uncertainty



Introduction



Missing education

- How can I use?
- How to share?





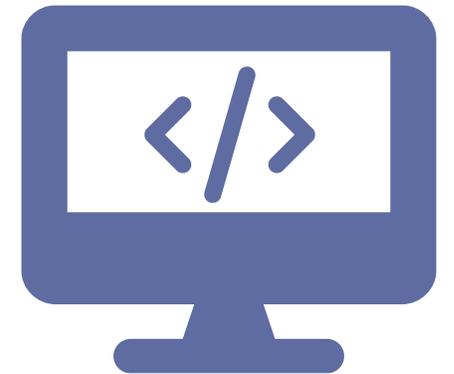
Rights & Limitations

Rights and Limitations



What do we know?

- Copy text NO
- Learn from text YES
- Reference text YES



Rights and Limitations



- Default copyright
- Explicit licenses can be provided

➤ Example Papers

- Copy text NO
- Copy code NO
- Learn from text YES
- Reprogram content YES

Conference Proceedings (1976 – present) ... and more

This searches **37802** conference papers from SAS Global Forum, SUGI, PharmaSUG, PhUSE, NESUG, SESUG, WUSS, MWSUG, PNWSUG, SCSUG, SEUGI, ...

ENHANCED BY Google

Perform a [search](#) for papers based on title, author or keywords.

[38 Papers](#) written by [Lex Jansen](#). [Contact me](#)

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4030 PharmaSUG papers (1997-2023) PharmaSUG 2024 May 19-22 - Baltimore, MD	337 PHUSE/FDA CSS posters (2012-2023) PHUSE CSS 2024 June 3-5 - Silver Spring, MD	578 PharmaSUG China papers (2012-2023) PharmaSUG China 2024 August 2-3 - Beijing, China
3008 WUSS papers (1993-2023) WUSS 2024 September 4-6 - Sacramento, CA	3301 SESUG papers (1993-2023) SESUG 2024 September 22-24 - Bethesda, MD	2561 PHUSE EU Connect papers (2005-2023) PHUSE EU Connect 2024 November 11-13 - Strasbourg, France

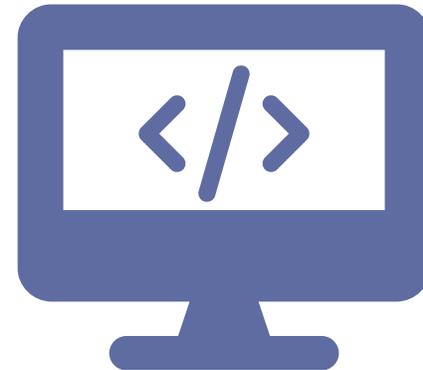
Screenshot from <https://www.lexjansen.com/>

Rights and Limitations



Copy Code

- Default copyright
- License explicitly provided
- Use copyright code -> possible sue
- Open source license -> follow terms
- Safe way, take idea, rewrite code



Rights and Limitations



Licenses

- Copyright (default)
- General licenses
 - Data, Data Model
 - Documents
 - Trainings
- Open Source Licenses
 - Source code
- Many other licenses



© Licenses – Creative Commons

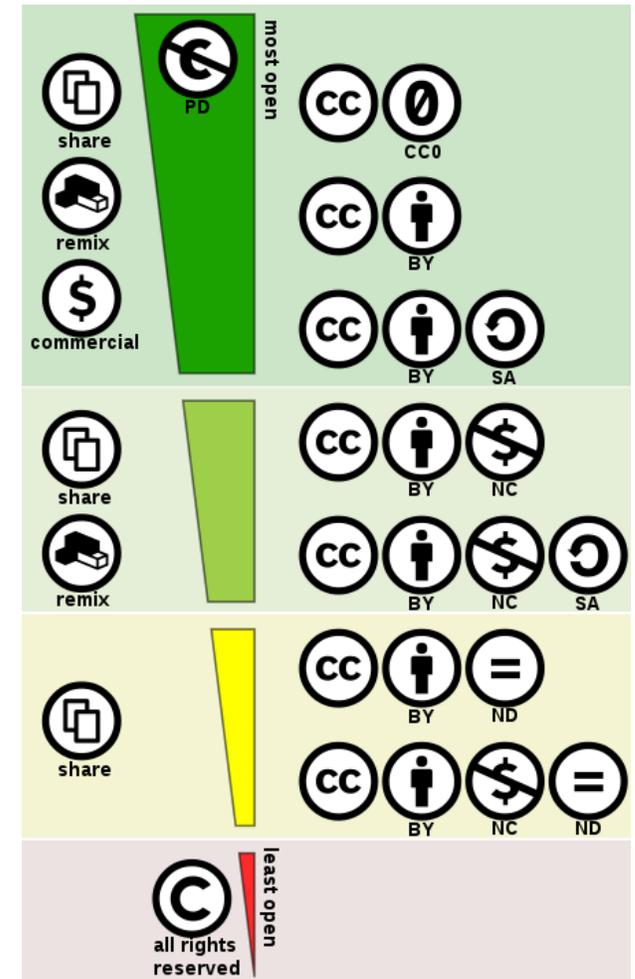


➤ Can be applied all copyright work

 **Public domain - No rights reserved**

 **BY - Attribution**

 **SA - Attribution - ShareAlike**



🔗 Licenses – Open Source Initiative



➤ License types

Permissible

- Allows re-licensing of derived work

- Similar BY-Attribution



Copyleft

- Derives must use same license

- Similar ShareAlike



Permissible 78%

Copy-Left 22%

* 2021 Statistics according [WhiteSource](#)

🔗 Licenses – Open Source Initiative



➤ License types

Permissible

- Apache 2.0
- MIT
- BSD
- ...

Copyleft

- GPLv3
- Microsoft Public
- ...

Permissible 78%

Copy-Left 22%

* 2021 Statistics according [WhiteSource](https://www.whitesourcesoftware.com)

Rights and Limitations



No plaintiff, no judge

- Illegal examples available
- Paper presenter likely wanted to share code for reuse
 - Ask author for permission to be sure





Practicalities

Practicalities



Where to copy code from?

- Documentation, help & examples

SAS® Help Center Customer Support | SAS Documentation

SAS® 9.4 and SAS® Viya® 3.5 Programming Documentation | SAS 9.4 / Viya 3.5

PDF | EPUB | Feedback

Language Statements SAS Output Delivery System: User's Guide

ODS Statement Category

ODS DOCUMENT Statement

Terms of Use | Copyright © SAS Institute Inc. All Rights Reserved

ODS _ALL_CLOSE Statement

ODS CHTML Statement

ODS CSVALL Statement

ODS DECIMAL_ALIGN Statement

ODS DOCUMENT Statement

ODS EPUB Statement

ODS EPUB2 Statement

Interaction: The combination of the ODS DOCUMENT statement and the DOCUMENT procedure enables you to store a report's individual components and then modify and replay the report. The ODS DOCUMENT statement stores the actual ODS objects that are created when running a report. You can then use the DOCUMENT procedure to rearrange, duplicate, or remove output from the results of a procedure or a database query without invoking the procedures from the original report. For complete documentation about the DOCUMENT procedure, see [DOCUMENT Procedure](#) in *SAS Output Delivery System: Procedures Guide*.

Table of Contents

[Syntax](#)

[Optional Arguments](#)

English Privacy Statement [Terms of Use](#) Copyright © SAS Institute Inc. All Rights Reserved

Practicalities



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SAS “Terms of Use” (Use of Website)

- 1) [...] own personal informational, educational or other **non-commercial** purposes unless otherwise expressly indicated;
- 2) all copies you make must properly **attribute** [...]
- 3) you may **not modify** any of the materials [...]
- 4) ...



Practicalities



Check the “Terms of Use” etc.

- Inconvenient
- People rarely do it
- Expectation for online help & documentation is that examples can be use

Purpose

- Protect documentation
- Avoid create a book / embed in different software

Will Software providers sue customer using code from their help documentation?

- Unlikely
-



Practicalities



Where to copy code from?

➤ Stack Overflow

Terms of Service



stackoverflow About Products For Teams Search... Log in Sign up

ggplot manually adjusting attributes

Asked today Modified today Viewed 12 times Part of R Language Collective

0

I am trying to change the legend on this plot in ggplot. I want it to have both the appropriate linetype and color in the one legend. However, I would be satisfied if I could just fix the linetype so it is correct and forget about the different colors. The below code does everything I want expect having the correct linetype in the legend. The last line of code does not appear to do anything, but I have included it to show my best attempt so far.

```
library(tidyverse)

ggplot(data.frame(x = c(-3,3)), aes(x = x))+
  stat_function(fun=dnorm, aes(color="mean 2"), linetype = 1,
              linewidth = 1.5, args = list(mean = 2))+
  stat_function(fun=dnorm, aes(color="mean 0"), linetype = 2,
              linewidth = 1.5, args = list(mean = 0))+
  scale_color_manual(values = c("red", "blue"),
                    name = "Mean")+
  scale_linetype_manual(values = c(1, 2))
```

Run code snippet Expand snippet

R Language Collective Join the discussion

This question is in a collective: a subcommunity defined by tags with relevant content and experts.

The Overflow Blog

- How do mixture-of-experts layers affect transformer models?
- What a year building AI has taught Stack Overflow

Featured on Meta

- New Focus Styles & Updated Styling for Button Groups
- Upcoming initiatives on Stack Overflow and across the Stack Exchange network

Practicalities



Where to copy code from?

➤ Stack Overflow



user contributions licensed under CC BY-SA.

ggplot manually adjusting attributes

Asked today Modified today Viewed 12 times Part of R Language Collective

I am trying to change the legend on this plot in ggplot. I want it to have both the appropriate linetype and color in the one legend. However, I would be satisfied if I could just fix the linetype so it is correct and forget about the different colors. The below code does everything I want expect having the correct linetype in the legend. The last line of code does not appear to do anything, but I have included it to show my best attempt so far.

R Language Collective

Join the discussion

This question is in a collective: a subcommunity defined by tags with relevant content and experts.

STACK OVERFLOW	PRODUCTS	COMPANY	STACK EXCHANGE NETWORK
Questions	Teams	About	Technology
Help	Advertising	Press	Culture & recreation
	Collectives	Work Here	Life & arts
	Talent	Legal	Science
		Privacy Policy	Professional
		Terms of Service	Business
		Contact Us	API
		Cookie Settings	Data
		Cookie Policy	

Blog Facebook Twitter LinkedIn Instagram

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Practicalities



Will contributed people or Stack Overflow sue?

- Unlikely

How to be safe?

- Check for license & follow
- Use idea and re-program

What is the content type?

- Trivial simple source & process
- Intellectual property



Practicalities



Create documentation

- Include license for source examples

Create post, blog, paper

- Include license for source

Unlicense / Public Domain

MIT (very simple, quote origin)





Examples

Examples



Open Source

- Use it as you like
- Modification
- Free distribution

Types

- Permissible
(attribution & more)
- Copyleft
(re-share)



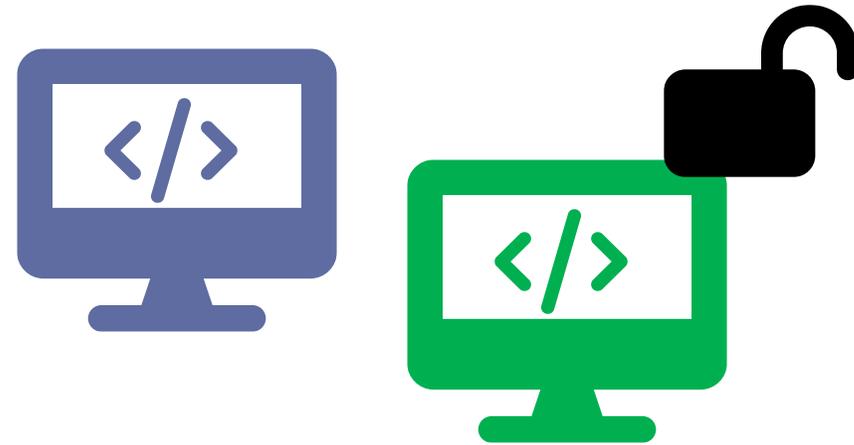
Examples



Permissible



Copyleft



User have right to get source-code

Examples



Find open source tools?

- Open Source Portal for Clinical Study Evaluations
<https://www.glacon.eu/portal>

The screenshot shows the website interface for Katja Glass Consulting. The header includes the company logo and navigation links: Home, Overview, Programs, More, and Info. Below the header, there are two tabs: 'Visual' and 'Table'. The main content area displays three featured open-source tools:

- OpenStudyBuilder**: OpenStudyBuilder - open-source metadata repository with a graph database, a user interface, APIs and more from NovoNordisk. The card includes a screenshot of the application's welcome screen and lists technologies: Python, Cypher, Web Tool CDISC, MDR.
- admiral**: admiral - ADaM in R Asset Library - is a R Package to map SDTM to Adad. This is a huge collaboration project running by Roche and GSK. The card includes a screenshot of the package's documentation page, which lists links, purpose, installation instructions, and developers.
- RPact**: The R package RPACT is a statistical program module, characterized as a comprehensive, validated software R package, that enables the simulation and analysis of parallel group designs with continuous, binary, and survival endpoint. RPACT can be downloaded per CRAN and will be available as open-source under LGPL3. The card includes a list of installation steps and a screenshot of the package's documentation page.

Example – R Package - Tplyr



Tplyr: A Grammar of Clinical Data Summary. A tool created to simplify the data manipulation necessary to create clinical reports.

- Permissible
- MIT License

Tplyr	
row_label2	var1_Placebo
<chr>	<chr>
<65	14 (16.3%)
65-80	42 (48.8%)
>80	30 (34.9%)
	86 (100.0%)

```
tplyr_table(adsl, TRT01P, where = SAFFL == "Y") %>%  
  add_layer(  
    group_desc(AGE, by = "Age (years)")  
  ) %>%  
  add_layer(  
    group_count(AGEGR1, by = "Age Categories n (%)")  
  ) %>%  
  build() %>%  
  kable()
```

row_label1	row_label2	var1_Placebo	var1_Xanomeline High Dose	var1_Xanomeline Low Dose	ord_layer_index	ord_lay
Age (years)	n	86	84	84	1	
Age (years)	Mean (SD)	75.2 (8.59)	74.4 (7.89)	75.7 (8.29)	1	
Age (years)	Median	76.0	76.0	77.5	1	
Age (years)	Q1, Q3	69.2, 81.8	70.8, 80.0	71.0, 82.0	1	
Age (years)	Min, Max	52, 89	56, 88	51, 88	1	

Example – R Package - Tplyr



CustomTplyr

- Copy the package
- Modify and use
- Keep the original license as reference
- Final source can be copyright



CustomSummary

- Copy and use code snippets from Tplyr
 - Keep the original license as reference
 - Final source can be copyright
-

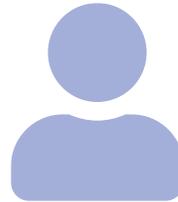
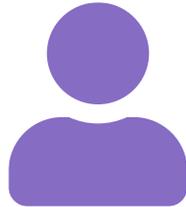
Examples - Copyleft



Open Source
GPL (& similar)



Can sell software
MUST provide source



Rights of users

Use
Modify
Share



Users put everything to public, granting GPL rights

Users can even sell further, granting GPL rights

Source NOT published in internet
Rights are to USERS, not public

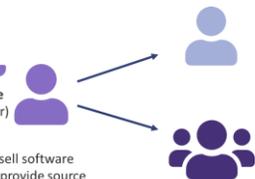
Users can use rights,
Can publish to public



Open Source
GPL (& similar)



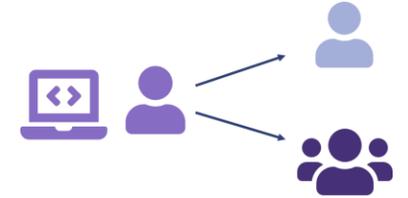
Can sell software
MUST provide source



Example – Copyleft - OpenStudyBuilder



GPL Copyleft License



VendorX Version



GPL

VendorX is paid by PharmaY which is using OpenStudyBuilderModified

- PharmaY has rights to use, modify, reshare code

Source Code managed in private GitHub



Users



Externals



Academia (ARO)

Example – Copyleft - OpenStudyBuilder

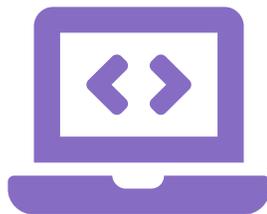
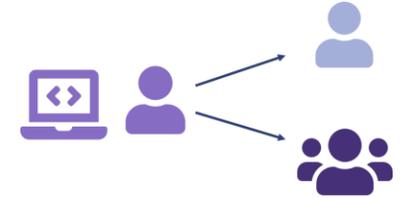


Academia (ARO)

John Doe wants the source for re-use.

John goes to VendorX and ask for source.

VendorX must provide source.



- John receive source
- He does not receive
 - Documentation
 - Change details
 - Database content
 - Configuration details
 - Plugins / Extension which are separate and separately licensed

Example – Copyleft



Copyleft license

- Risk of financial loss
 - Data is not to be exposed
 - Configuration (secrets, keys to be stored externally)
 - Source is just a small amount of work
 - Documentation
 - Configuration
 - Testing
 - Training
 - ...



Example – Copyleft - OpenStudyBuilder



GPL



Harmonized Solution

- Enable extensions
- Configurations

GPL



Divergent Solutions

GPL



Divergent Solutions

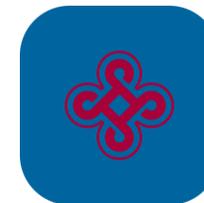
GPL



Divergent Solutions

Any License

Plugins
Extensions
Apps



Example – Copyleft - OpenStudyBuilder

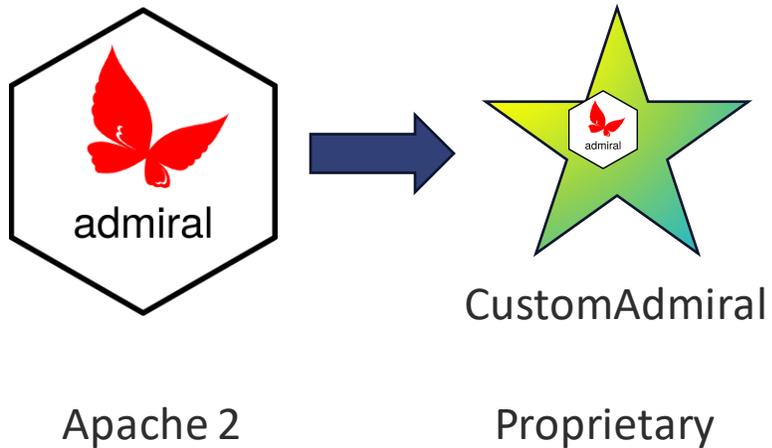


- Configuration -> color to green 
 - Plugin -> new tab „documentation“ 
 - Extension / App -> new cost calculation tool 
 - Change code, hardcode color (GPL) 
-

Example – Copyleft - R



- R software is copyleft open source



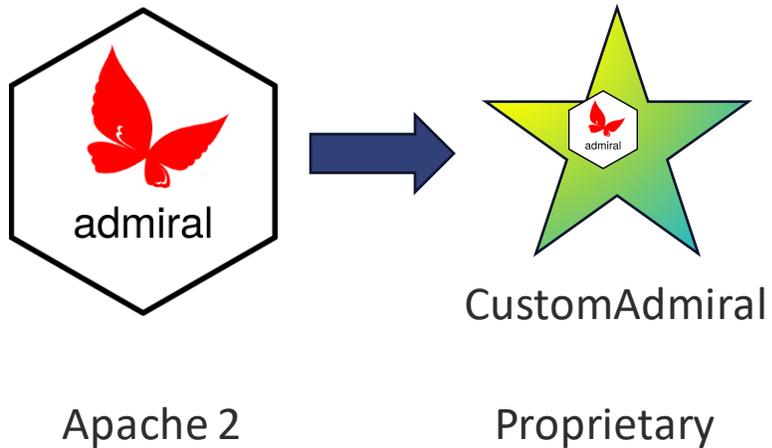
R executable, embedding R
This software is GPL!



Example – Copyleft - R



- R software is copyleft open source

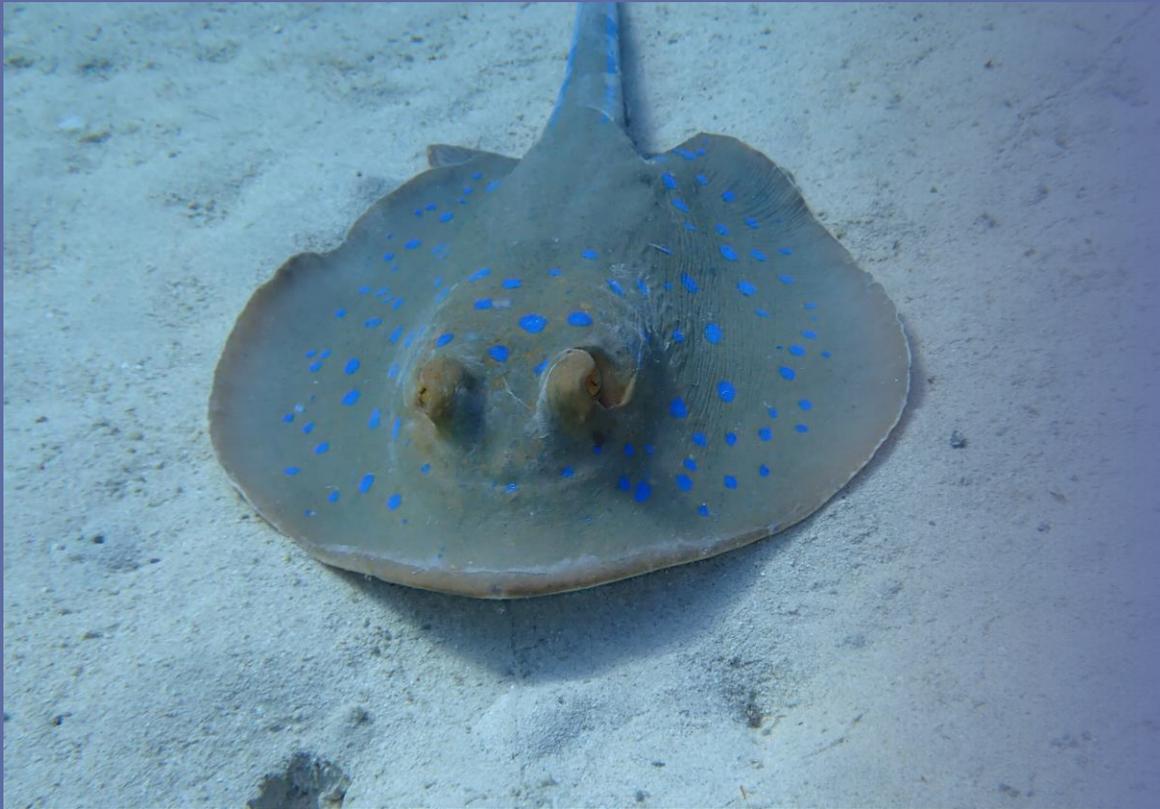


Read Excel File
Create Derivations
Create Excel File
Requires R



This software is Proprietary!



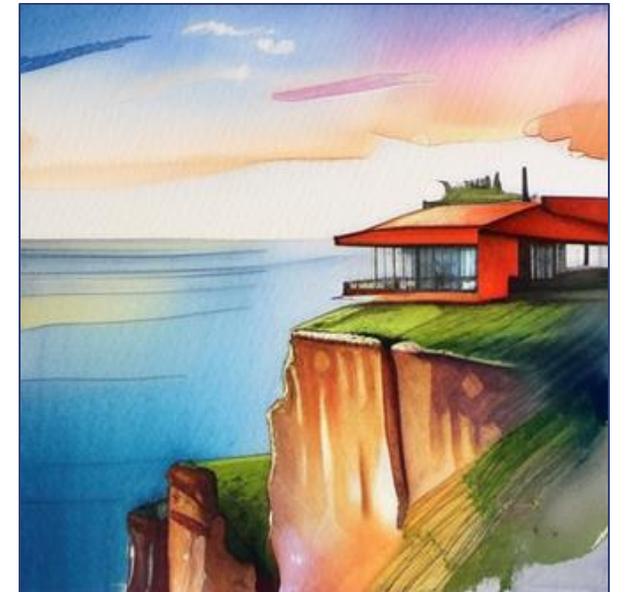


Summary

Summary



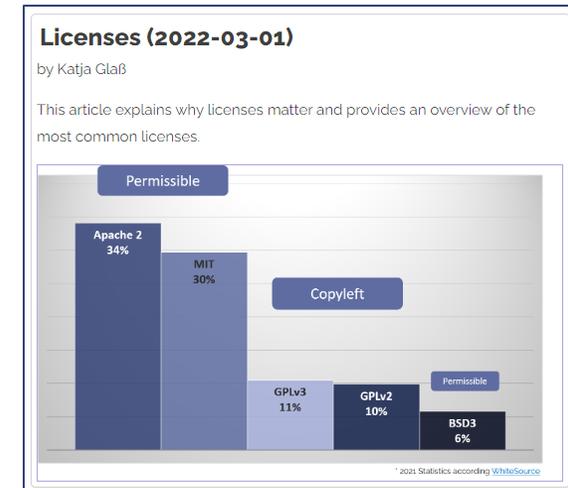
- Still much uncertainty
- Default copyright
- Safest, use idea and re-program
- Care about licenses (terms of use)
- Apply license to own code
- Don't be afraid of copyleft
 - Code is not the diamonds, it's the data



Links



- Article on licenses
(<https://www.glacon.eu/portal/articles/2022-03-01-licenses.html>)
- Choose a license – good overview
(<https://choosealicense.com/licenses/>)
- The legal side of open source
(<https://opensource.guide/legal/>)
- CDISC Open Source Alliance
(<https://cosa.cdisc.org/>)
- Open Source Technology in Clinical Data Analysis
(<https://phuse-org.github.io/OSTCDA/>)



Questions?



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www.glacon.eu/portal
