

HERMES Training Activities (01)

Introduction to Open Access

Orçun Madran
Hacettepe University

PROJECT NUMBER 2020-1-IT02-KA226-HE-095624
CUP NUMBER B65F21000120006



Outline

- What is open access?
- A Brief History of Open Access
- Why use open access?
- Ways of open access publishing:
 - Green Open Access
 - Golden Open Access
 - Diamond Open Access
- Open Culture Ecosystem (Sample project review)
 - Open Hardware
 - Open Software
 - Open Access
 - Open Data
 - Open Education
 - Open Licenses
- Being a part of open culture



What is Open Access?

Open access is a broad international movement that seeks to **grant free and open online access** to academic information, such as **publications and data**.

A publication is defined 'open access':

- when there are no financial, legal or technical barriers to accessing it
- that is to say when anyone can **read, download, copy, distribute, print,**
- search for and search within the information,
- or use it **in education or in any other way** within the legal agreements.

<https://www.openaccess.nl/en/what-is-open-access>



A Short Definition

Open access (OA) is a set of principles and a range of practices through which **research outputs** are distributed online, **free of access charges** or **other barriers**.

Peter Suber, "Open Access Overview".

<http://legacy.earlham.edu/~peters/fos/overview.htm>



The screenshot shows a web browser window with a single tab titled "Peter Suber, Open Access". The address bar displays "legacy.earlham.edu/~peters/fos/overview.htm" with a "Not secure" warning. The page content includes a main heading "Open Access Overview", a sub-heading "Focusing on open access to peer-reviewed research articles and their preprints", and three paragraphs of text. The first paragraph states the author's hope that the text is short enough to read but long enough to be useful. The second paragraph provides links to a "very brief" introduction, "writings on OA", and a "book home page". The third paragraph welcomes comments and suggestions. The author's name, "Peter Suber", is listed at the bottom.

Open Access Overview

Focusing on open access to peer-reviewed research articles and their preprints

This is an introduction to open access (OA) for those who are new to the concept. I hope it's short enough to read, long enough to be useful, and organized to let you skip around and dive into detail only where you want detail. It doesn't cover every nuance or answer every objection. But for those who read it, it should cover enough territory to prevent the misunderstandings that delayed progress in our early days.

If this overview is still too long, then see my [very brief](#) introduction to OA. It's available in 20+ languages and should print out on just one page, depending on your font size. If these pieces are too short, see my other [writings on OA](#), including [Open Access](#) (MIT Press, 2012), my book-length introduction to OA. The [book home page](#) includes links to OA editions and a continually growing collection of updates and supplements.

I [welcome](#) your comments and suggestions.

[Peter Suber](#)

“I hope it's short enough to read,
long enough to be useful,
and organized to let you skip around and
dive into detail only where you want detail.”



United Nations
Educational, Scientific and
Cultural Organization

UNESCO

"Building peace in the minds of men and women"

IN BRIEF

WHAT WE DO

WHERE WE WORK

PARTNERS

JOIN US

RESOURCES

Home > Open Access to scientific information

Open Access to scientific information

UNESCO promotes Open Access (OA) to scholarly information emanating from publicly funded research. This includes journal articles, conference papers, research algorithms and codes, as well as research datasets of various kinds. Scholarly information is both a researcher's greatest output and technological innovation's most important resource. UNESCO promotes and supports Open Access—the online availability of scholarly information to everyone, free of most licensing and copyright barriers—for the benefit of global knowledge flow, innovation and socio-economic development. UNESCO supports non-commercialization of access to knowledge.

RELATED LINKS

- RELATED LINKS
- [UNESCO Recommendation on Open Science](#)
- [Go FAIR](#)
- [The Global Open Access Portal \(GOAP\)](#)
- DOCUMENTS



<https://en.unesco.org/themes/open-access-scientific-information>

Introduction to open acce x +

unesdoc.unesco.org/ark:/48223/pf0000231920

WWW.UNESCO.ORG

unesco UNESDOC Digital Library

Search for

About Services Collections Explore Resources Related Repositories Login

Notice

book

Introduction to open access

Person as author: [Kanjilal, Uma](#) [1], [Das, Anup Kumar](#) [6]

ISBN: 978-92-3-100074-4

Collation: 81 p.

Language: English

Year of publication: 2015

Licence type: [CC BY-SA 3.0 IGO](#) [10025]

Type of document: book

Online
Open Access

Favourites Add Share

UNESCO United Nations Educational, Scientific and Cultural Organization

1

Introduction to
Open Access

Open Access for Library Schools

<https://unesdoc.unesco.org/ark:/48223/pf0000231920>

Açık Erişim Türkiye

Açık Erişim Nedir?

Açık erişim genellikle yüksek abonelik ücretlerinden kaynaklanan bilimsel çıktılara sınırlı erişim sorununu irdeler. Okuyucunun bilimsel bilgiye (makaleler, kitaplar, araştırma verileri) ücretsiz erişimini ve bu bilgilerin lisanslanarak araştırmacılar, sanayi ve vatandaşlar tarafından daha çok kullanılmasını sağlayan uygulamadır.

[Budapeşte Açık Erişim Girişimi](#)'nin (BOAI) ve [Açık Erişim Berlin Bildirgesi](#)'nin (Ekim 2003) açık erişim tanımları önemlidir.

BOAI'nin tanımına göre açık erişim, "bilimsel literatürün İnternet aracılığıyla finansal, yasal ve teknik bariyerler olmaksızın, erişilebilir, okunabilir, kaydedilebilir, kopyalanabilir, yazdırılabilir, taranabilir, tam metne bağlantı verilebilir, dizinlenebilir, yazılıma veri olarak aktarılabilir ve her türlü yasal amaç için kullanılabilir olması"dır.

 Beğen Paylaş

Sen ve 394 diğer kişi bunu beğendiniz.



A Brief History of Open Access

- At the end of the 20th century, university librarians around the world found themselves in the middle of a big problem now known as the “serials crisis”.
- The serials crisis was the result of subscription costs for publications rising much faster than inflation.
- Simply no longer had money for all of the publications they wanted and were forced to make difficult choices between journals.
- On the other hand, through the world wide web, anyone with an internet connection could publish information.
- The full potential of sharing knowledge freely on the web was exemplified by the Free Software Movement, and various groups began putting their studies for access free.

For whole story: <https://blogs.harvard.edu/openaccess101/what-is-open-access/what-is-open-access/>

Why use open access?

I have few questions for you:

- Who conducts publicly funded research?
- Who reports these research outputs (studies)?
- Who reviews these studies (articles, conference papers, etc.)?
- Who have to read these studies?
- Who have to pay to read or access these studies?

Do you have any idea?



Why use open access?

- Who conducts publicly funded research?
- Who reports these research outputs (studies)?
- Who reviews these studies (articles, conference papers, etc.)?
- Who have to read these these studies?
- Who have to pay to read or access these studies?

SAME PEOPLE

(Academics, medical doctors, scientists...)



Why use open access?

- In order not to waste extremely valuable public funds.
- In order for all parts of the society (or any community) to benefit from the studies carried out with public funds.
- To provide equal opportunity in the field of research.

AND of course

To avoid paying for access to our own studies :)



How to publish research outputs as open access?

Main concepts (roads) of open access publishing:

- **Green**
- **Gold**
- **Diamond**

Which one is more close to you?
(just think about the meaning of the word)



Green Open Access

The green route: The full text of academic publications is deposited in a trusted repository, a publicly accessible database managed by a research organisation.

We can also describe as a self-archiving.

Self-archiving is the act of (the author's) depositing a free copy of an electronic document online in order to provide open access to it.

Golden Route

- **Full Open Access journals:** publication via publisher platforms, in full open access journals. This route may involve a charge. The publication costs, known as ‘article processing charges’ (APCs), are covered by authors or by their institutions. Most research funders support open access and are willing to cover the costs themselves.
- **Hybrid Journals:** publication via ‘hybrid’ journals. These journals are subscription journals that allow open access publication of individual articles on payment of an Article Processing Charge (APC).

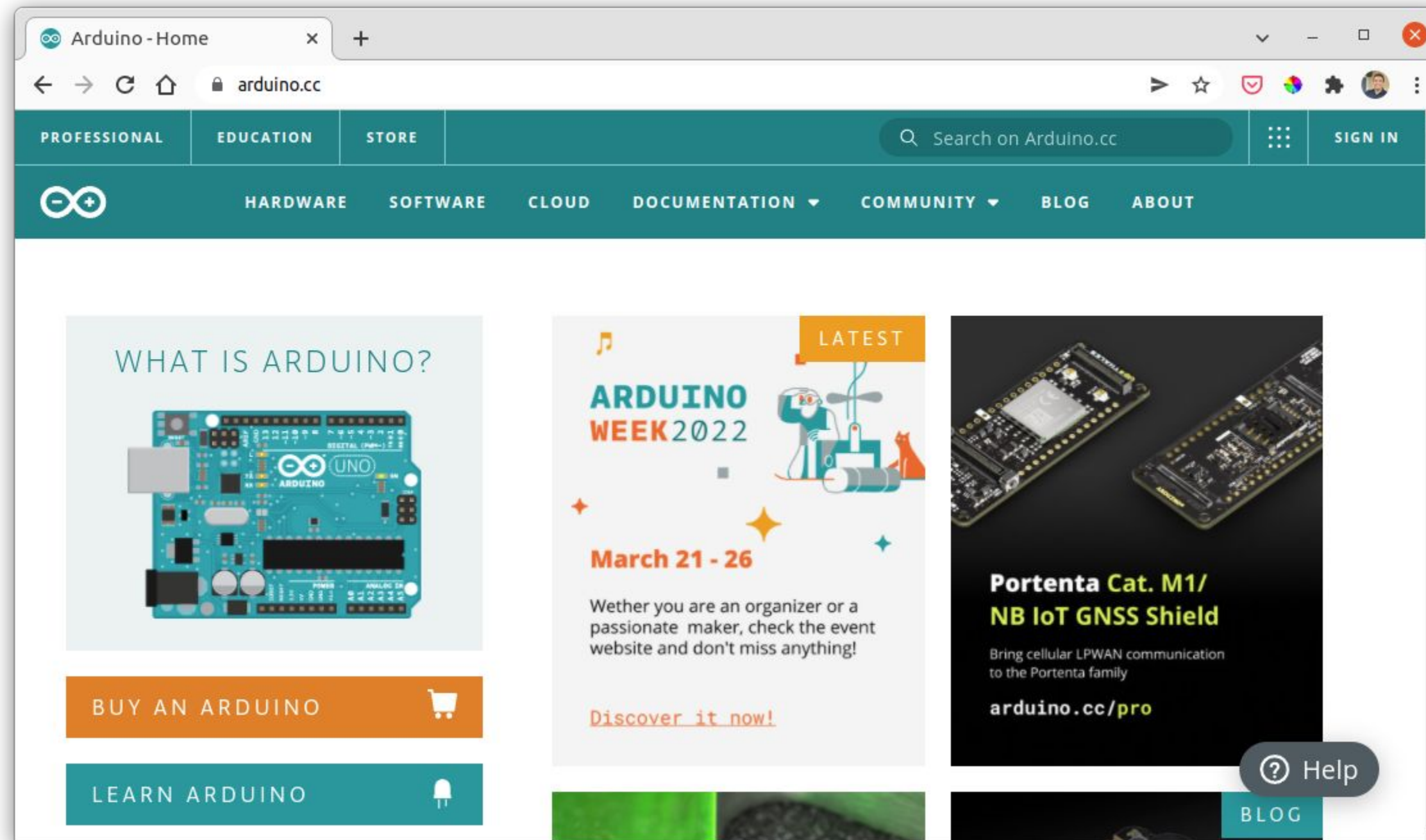
Diamond Open Access

The diamond route: publication via diamond journals/platforms that do not charge author-facing publication fees (APCs).

Diamond open access journals are usually funded via library subsidy models, institutions or societies.

Open Culture Ecosystem

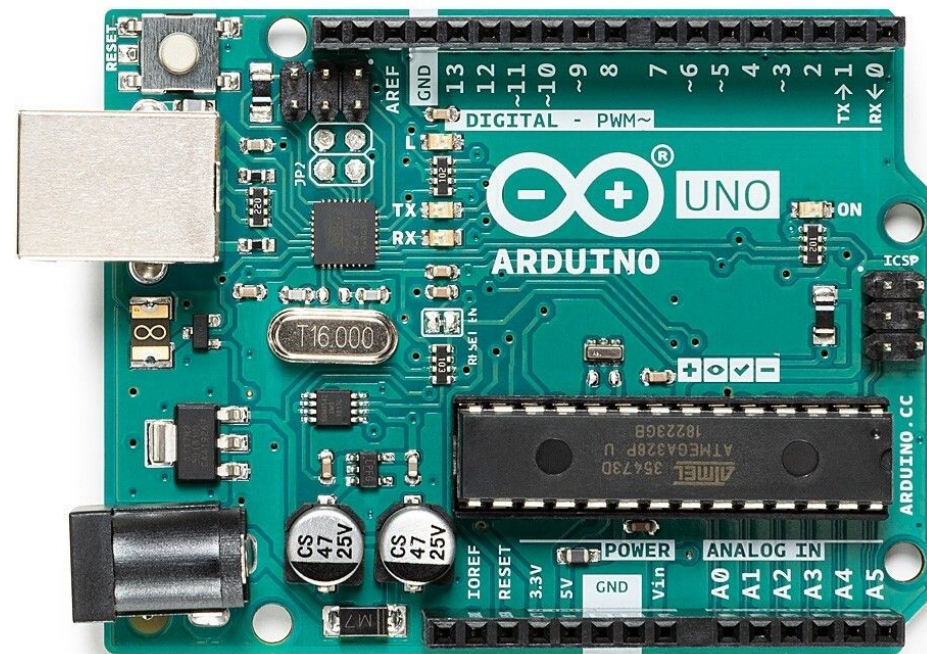
SAMPLE PROJECT



<https://www.arduino.cc/>

What is Arduino?

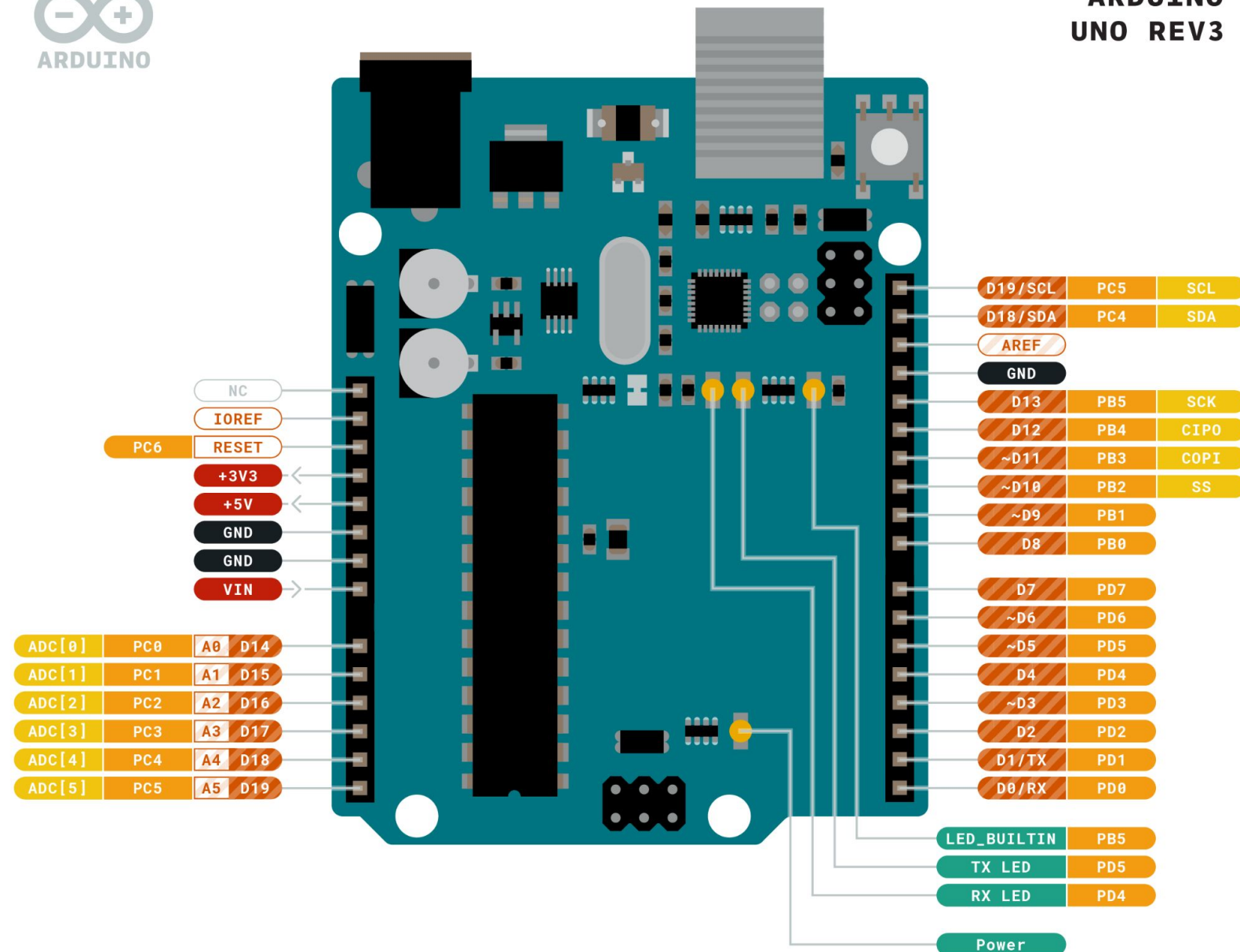
Arduino is an **open-source** electronics platform based on easy-to-use hardware and software. It's intended for anyone making interactive projects.



Open Hardware



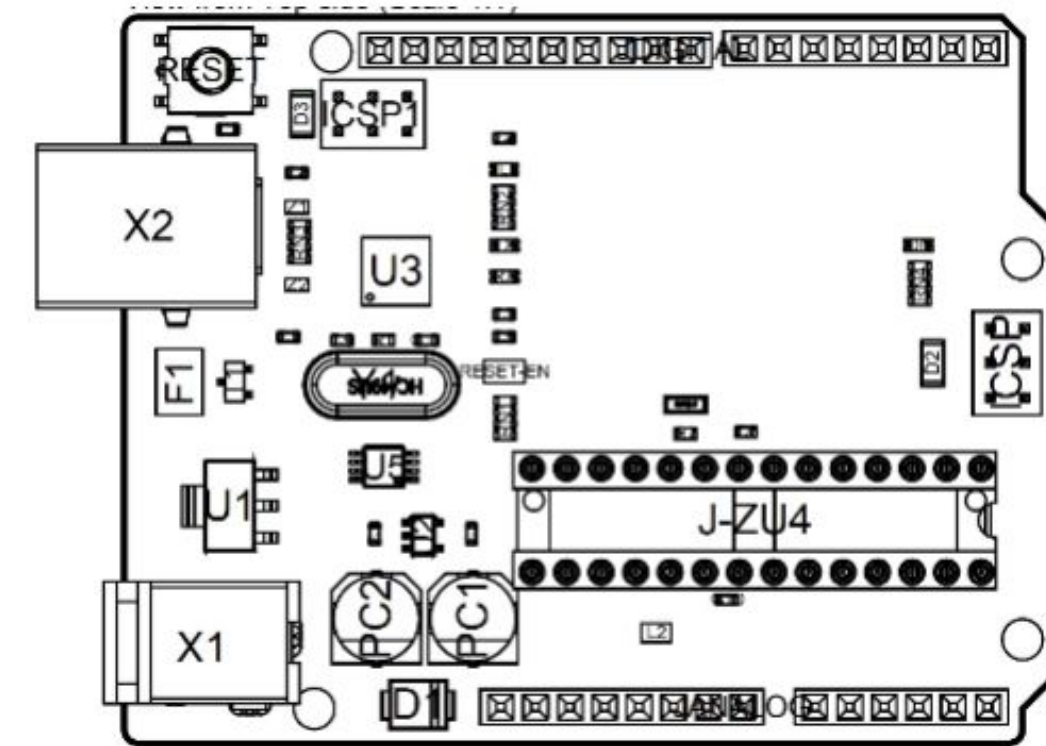
ARDUINO UNO REV3



3 Functional Overview

3.1 Board Topology

Top view



Board topology

- Ground
- Internal Pin
- Digital Pin
- Microcontroller's Port
- Power
- SWD Pin
- Analog Pin
- LED
- Other Pin
- Default

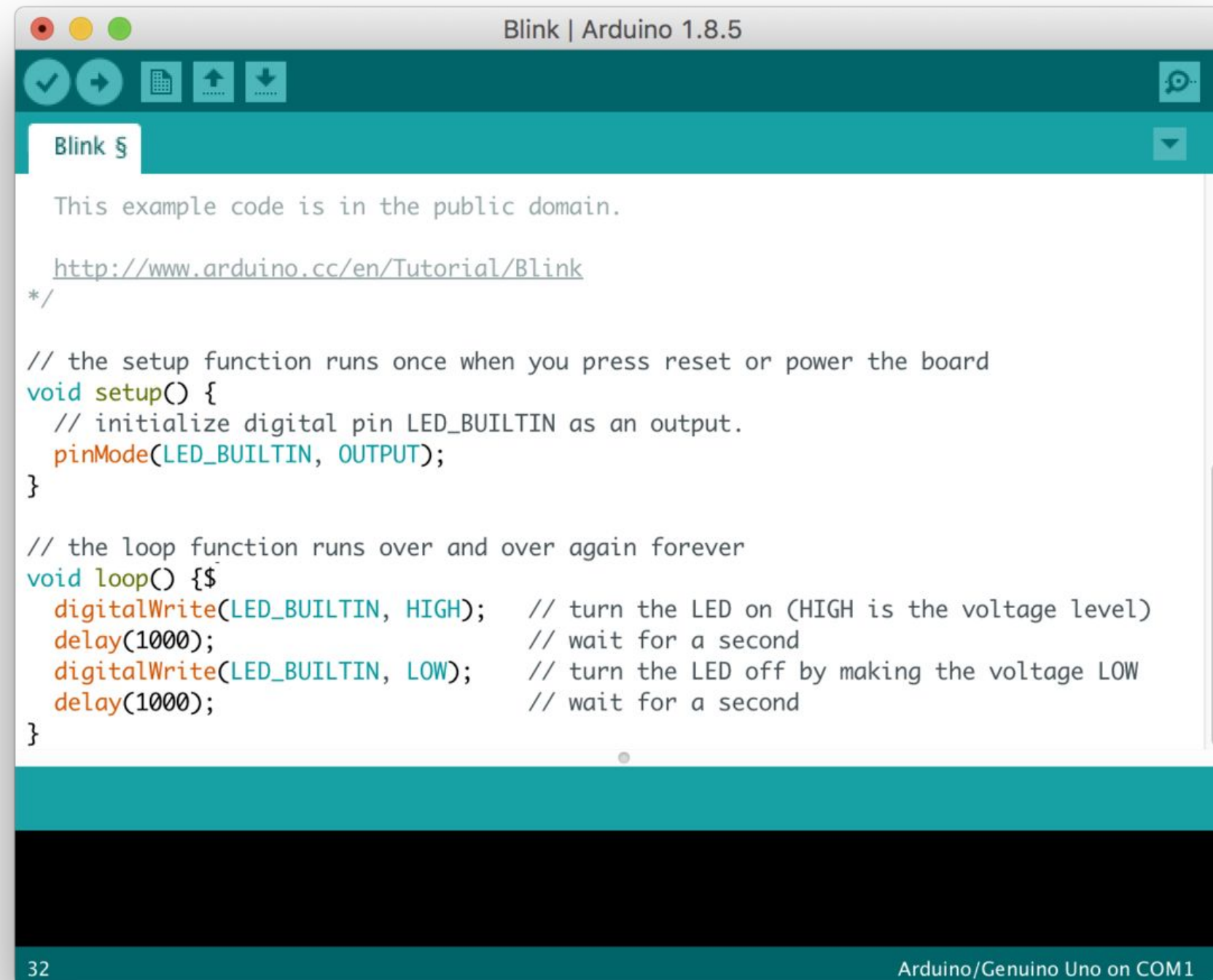
ARDUINO.CC



This work is licensed under the Creative Commons Attribution-ShareAlike 4.0 International License. To view a copy of this license, visit <http://creativecommons.org/licenses/by-sa/4.0/> or send a letter to Creative Commons, PO Box 1866, Mountain View, CA 94042, USA.

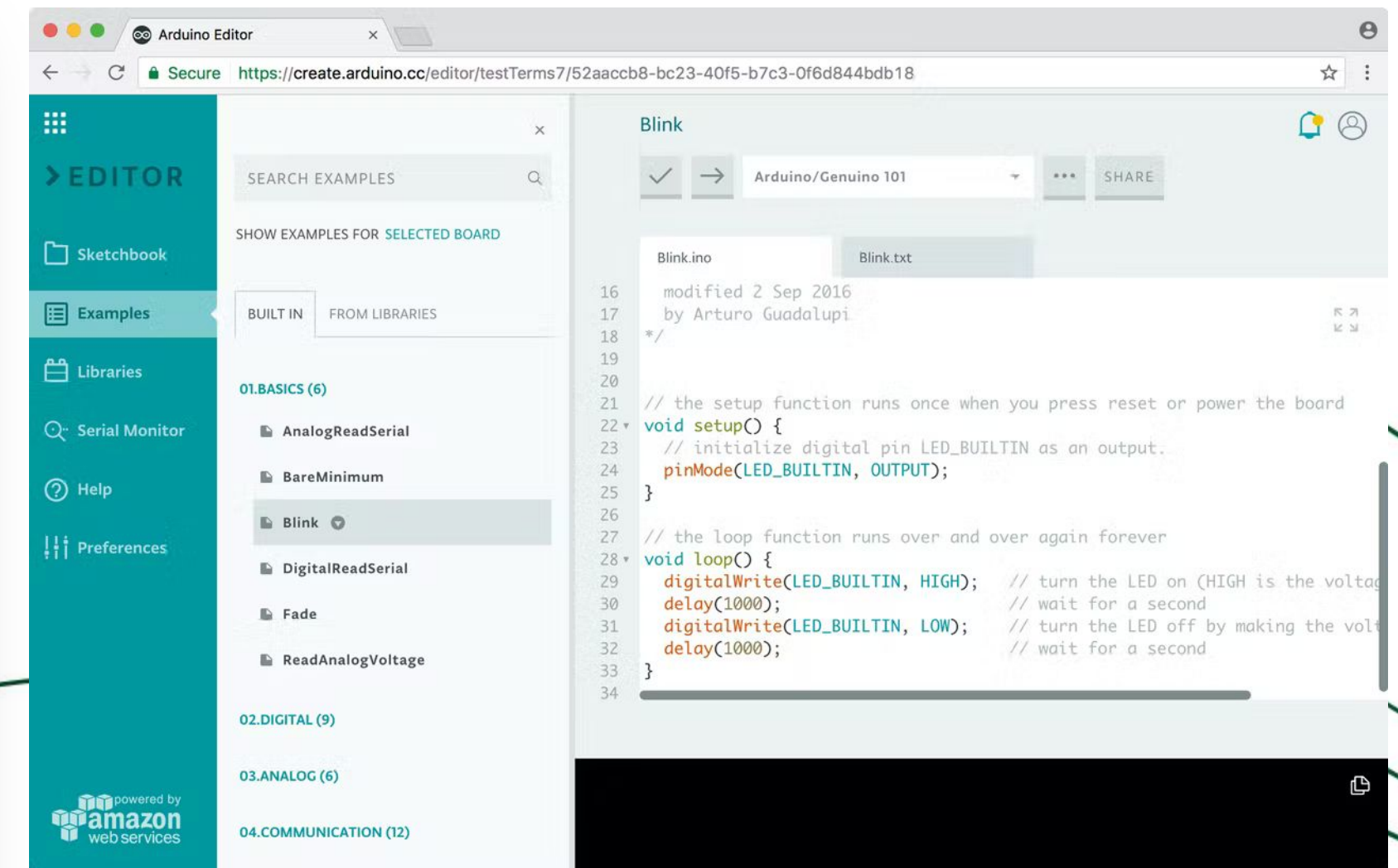


Open Software



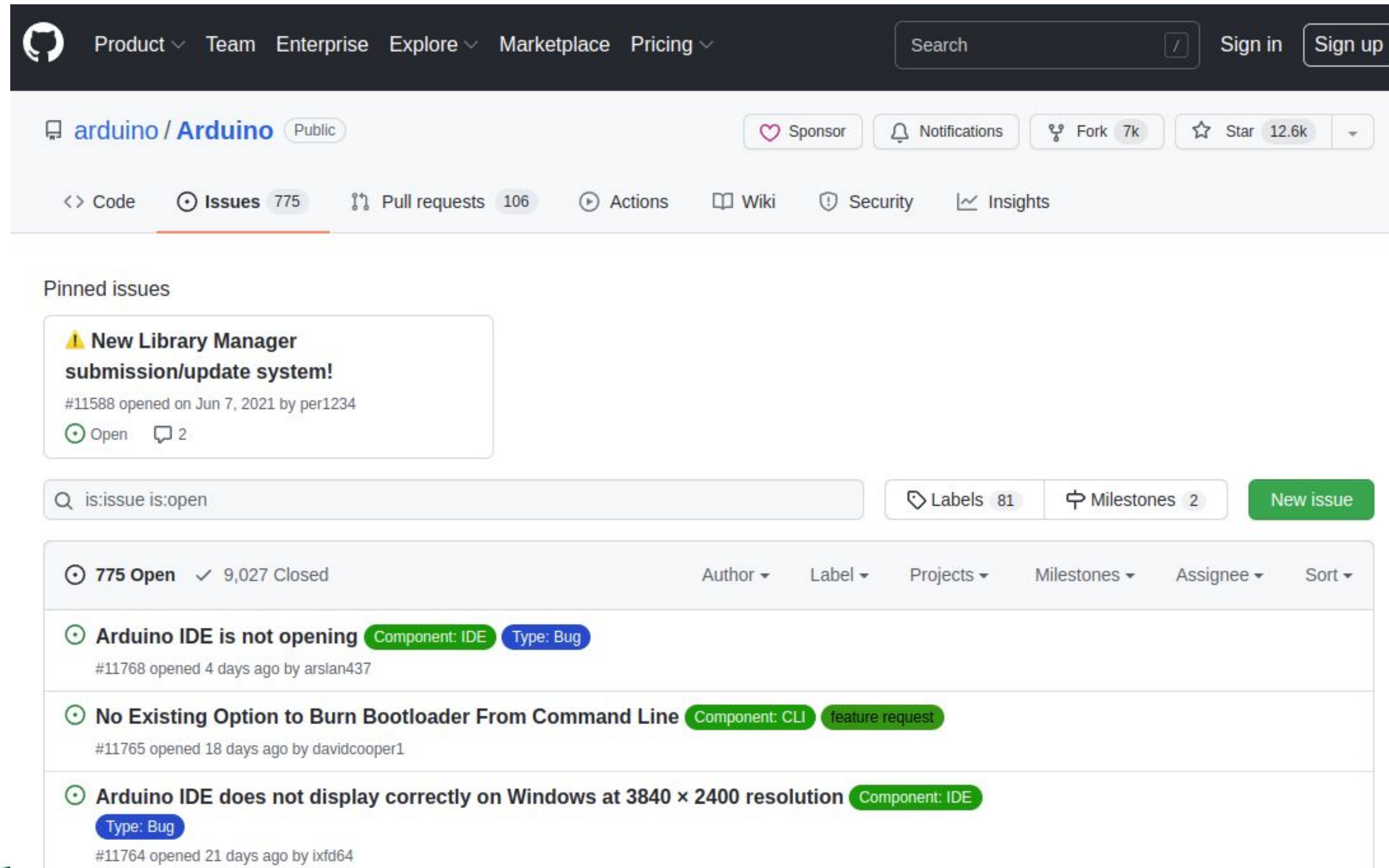
```
Blink | Arduino 1.8.5  
Blink §  
This example code is in the public domain.  
http://www.arduino.cc/en/Tutorial/Blink  
*/  
  
// the setup function runs once when you press reset or power the board  
void setup() {  
  // initialize digital pin LED_BUILTIN as an output.  
  pinMode(LED_BUILTIN, OUTPUT);  
}  
  
// the loop function runs over and over again forever  
void loop() {  
  digitalWrite(LED_BUILTIN, HIGH); // turn the LED on (HIGH is the voltage level)  
  delay(1000); // wait for a second  
  digitalWrite(LED_BUILTIN, LOW); // turn the LED off by making the voltage LOW  
  delay(1000); // wait for a second  
}
```

32 Arduino/Genuino Uno on COM1



```
Arduino Editor  
Secure https://create.arduino.cc/editor/testTerms7/52aacb8-bc23-40f5-b7c3-0f6d844bdb18  
EDITOR  
SEARCH EXAMPLES  
SHOW EXAMPLES FOR SELECTED BOARD  
Sketchbook  
Examples BUILT IN FROM LIBRARIES  
Libraries  
Serial Monitor  
Help  
Preferences  
powered by amazon web services  
01.BASICS (6)  
  AnalogReadSerial  
  BareMinimum  
  Blink  
  DigitalReadSerial  
  Fade  
  ReadAnalogVoltage  
02.DIGITAL (9)  
03.ANALOG (6)  
04.COMMUNICATION (12)  
Blink  
Arduino/Genuino 101  
Blink.ino Blink.txt  
16 modified 2 Sep 2016  
17 by Arturo Guadalupi  
18 */  
19  
20  
21 // the setup function runs once when you press reset or power the board  
22 void setup() {  
23   // initialize digital pin LED_BUILTIN as an output.  
24   pinMode(LED_BUILTIN, OUTPUT);  
25 }  
26  
27 // the loop function runs over and over again forever  
28 void loop() {  
29   digitalWrite(LED_BUILTIN, HIGH); // turn the LED on (HIGH is the voltage level)  
30   delay(1000); // wait for a second  
31   digitalWrite(LED_BUILTIN, LOW); // turn the LED off by making the voltage LOW  
32   delay(1000); // wait for a second  
33 }  
34
```


Open Community







The screenshot shows the GitHub interface for the Arduino repository. At the top, there is a navigation bar with links for Product, Team, Enterprise, Explore, Marketplace, and Pricing. A search bar and buttons for Sign in and Sign up are also present. Below the navigation bar, the repository name 'arduino / Arduino' is displayed, along with a 'Public' label. Action buttons for Sponsor, Notifications, Fork (7k), and Star (12.6k) are visible. A secondary navigation bar includes links for Code, Issues (775), Pull requests (106), Actions, Wiki, Security, and Insights. The 'Issues' section is active, showing a 'Pinned issues' box with a warning icon and the text 'New Library Manager submission/update system!'. Below this, a search bar contains the query 'is:issue is:open'. A filter bar shows 'Labels 81' and 'Milestones 2', with a 'New issue' button. The main content area displays a list of issues with columns for status (775 Open, 9,027 Closed), author, label, projects, milestones, assignee, and sort. The first issue is 'Arduino IDE is not opening' (Component: IDE, Type: Bug), the second is 'No Existing Option to Burn Bootloader From Command Line' (Component: CLI, feature request), and the third is 'Arduino IDE does not display correctly on Windows at 3840 x 2400 resolution' (Component: IDE, Type: Bug).







Open Access



DOAJ OPEN GLOBAL TRUSTED

SUPPORT   APPLY  SEARCH 

SEARCH  DOCUMENTATION  ABOUT  LOGIN 

INFORMATICS IN EDUCATION (JUN 2020)

Arduino and Numerical Mathematics

Dorđe HERCEG, Dejana HERCEG

AFFILIATIONS +

DOI
<https://doi.org/10.15388/infedu.2020.12>

Journal volume & issue
Vol. 19, no. 2
pp. 239 – 256

Abstract

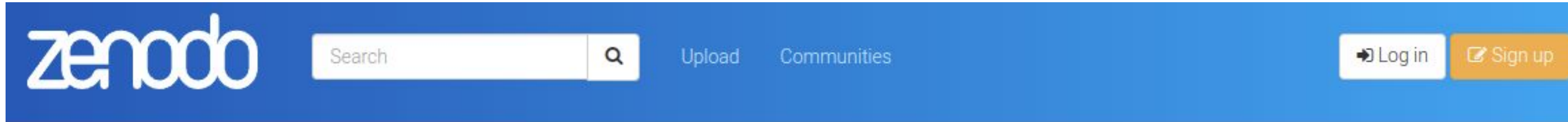
READ ONLINE

Published in *Informatics in Education*

ISSN
1648-5831 (Print)
2335-8971 (Online)



Open Data



zenodo Search Upload Communities Log in Sign up

January 30, 2020

Dataset **Open Access**

Trial Data from GPS Arduino GPS Collars

Conrad James Foley

Sample custom built GPS collar data using both GPS and accelerometer.

[Preview](#)

Files (227.7 MB)

Name	Size	
ACCLOG00.CSV	227.6 MB	Preview Download
md5:46d0f0f5adf3d7d0e1b1d8c3e7829496		
GPSLOG00.CSV	127.1 kB	Preview Download
md5:e0ef4940acc4809785769257dcd5349c		

78

views

88

downloads

[See more details...](#)

Indexed in

OpenAIRE

Publication date:

January 30, 2020

DOI:

DOI [10.5281/zenodo.3631277](https://doi.org/10.5281/zenodo.3631277)



Open Education

MIT OPEN COURSEWARE
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Subscribe to the OCW Newsletter

f i y W

Help | Contact Us

Home | FIND COURSES | For Educators | Give Now | About | Search | Search Tips

Home » Supplemental Resources » Collaborative Design and Creative Expression with Arduino Microcontrollers

Collaborative Design and Creative Expression with Arduino Microcontrollers

RESOURCE HOME <

SYLLABUS

INSTRUCTOR INSIGHTS

CLASS ACTIVITIES

STUDENT PROJECTS

HOST YOUR OWN WORKSHOP



Students collaborated to design an Arduino prototype. (Image courtesy of Andrew Ringler.)

Author(s)
Kyle Keane, PhD
Andrew Ringler, MFA
Mark Vrablic
Abhinav Gandhi

CITE THIS RESOURCE

Co-funded by the
Erasmus+ Programme
of the European Union



It does not matter..!

Where you are



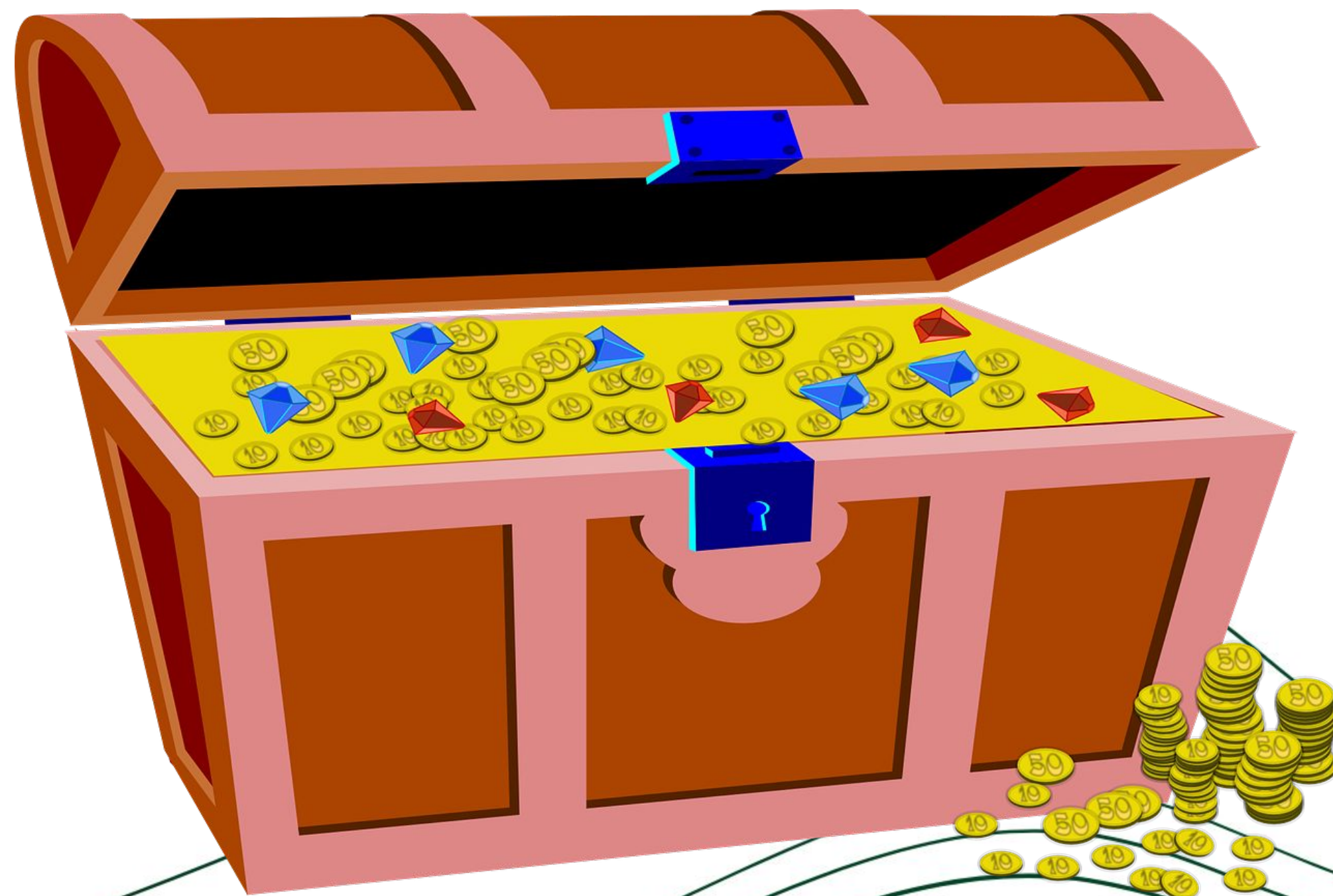
It does not matter..!

Who you are



It does not matter..!

How much you earn



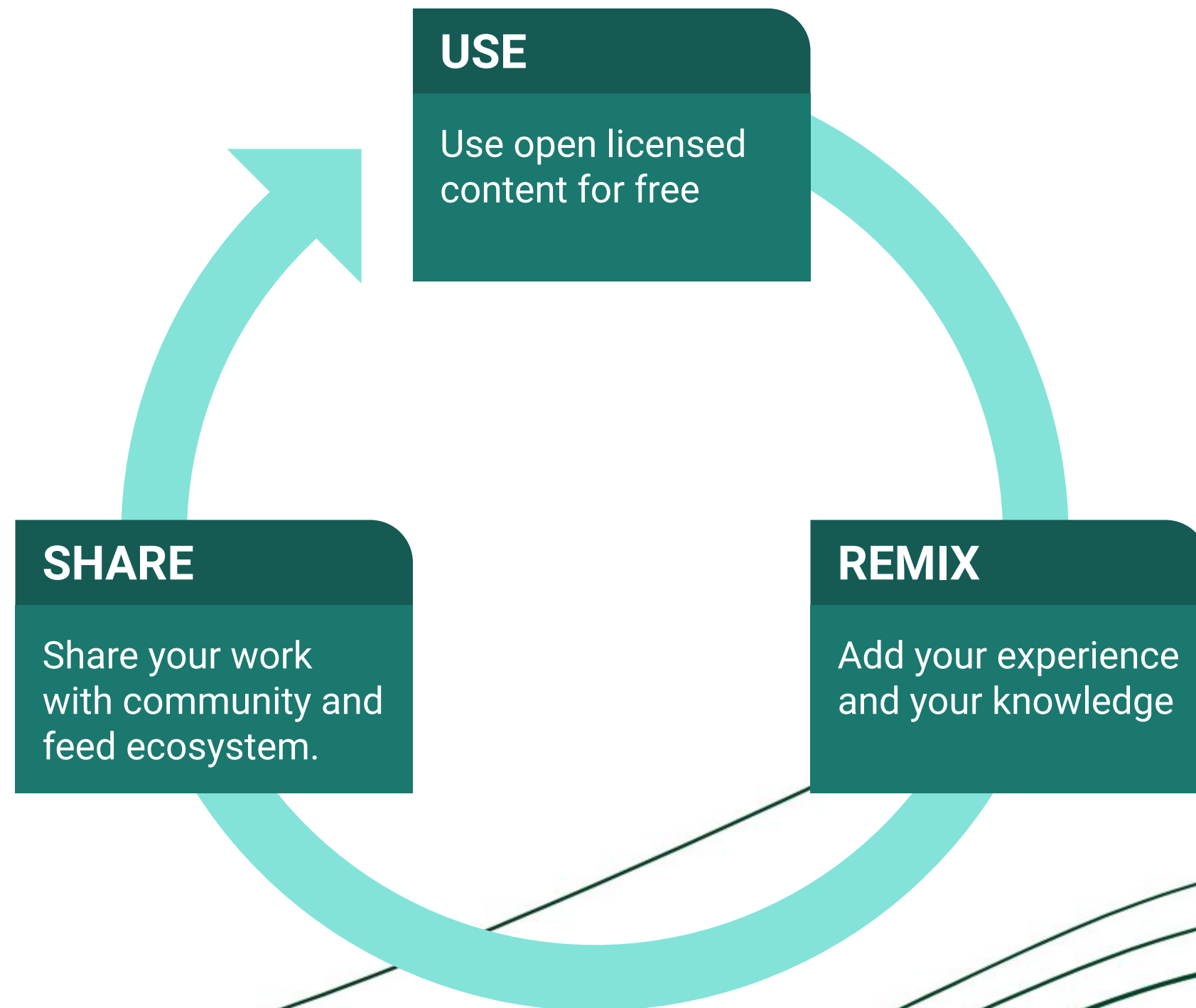
Open Culture (Open Science)

Provides equal opportunity between

- students,
- scientist,
- countries,
- all the people!



Being a part of open culture



Questions & Answers



HERMES Training Activities (01)

Be a part of open culture :)

Orçun Madran
Hacettepe University

PROJECT NUMBER 2020-1-IT02-KA226-HE-095624
CUP NUMBER B65F21000120006