Week 5: 3D Scanning & Printing

- regional meeting
- prep meeting
- global class
- Lecture Chat
- 3D Printing Design Rules
- global open time
- local lecture
- recitation AI
- recitation chat
- Galvanizing

regional meeting

Mkhitar Evoyan



good trick to connect esp32 without soldering
 Note. After uploading the code I’ll need to reset the board to start the code execution by pressing b button on device. This will put the board into the programming mode. Once the upload is complete, release the “B” button. By Pressing the “R” (Reset) button to reset the board and start running the uploaded code.
He uses Telegram chatbot

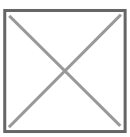
Zhirayr Ghukasyan



Yerlan Turgenbayev



Dylan Heneck



4-7-8 breathing technique

Irja Linnerud



http://irja-ed23b9.waaglabs.nl/assets/images/week4/temp_hum_lcd.jpg

Sam Hos

Important for linux users.¶

When setting up PlatformIO on another system we ran into the issue that the machine couldn't upload the code properly. We first checked how the OS interacted with dmesg. dmesg on linux shows the kernel activity.

I've delved a bit deeper into it and then I found online that with the first batches of espC3 supermini's have issues with the antenna. When I was debugging it I noticed that connecting the ground to the antenna fixed it when I tried it with a pin. But when soldered on it didn't work anymore and then only thing that worked was my finger.



Patrick Dezséri



PlatformIO issues with win10 home
For Windows 10 Home

So I needed to do some magic as I am on windows 10 home. This is the following magic in CMD with admin privileges:

```
git config --system core.longpaths true
FOR %F IN ("%SystemRoot%\servicing\Packages\Microsoft-Windows-GroupPolicy-ClientTools-Package~*.mum") DO (DISM /Online /NoRestart /Add-Package:"%F")
FOR %F IN ("%SystemRoot%\servicing\Packages\Microsoft-Windows-GroupPolicy-ClientExtensions-Package~*.mum") DO (DISM /Online /NoRestart /Add-Package:"%F")
```

Than some more magic on other parts with Run and Group Policy edits. But you can follow Source 1 for that.

Forrest Oliphant



Works for cuttle https://cuttle.xyz/@forresto

Arda Ozkurt



Group project

prep meeting

Computer controlled machining has to be on a machine where the sorter side is at least 1m!

This month we will be introduced to our global evaluator.

global class

Albert hat eine Nachricht an Neils randomizer geschickt :-)

Yuya Tokuyama



pico w

My Final Project: Golgo 13 Machine

a DIY drone with SAR, rather advanced

Jenna Chebaro



Windows subsystem for Linux (windows wsl)
https://imagemagick.org/script/download.php
programmers: http://pub.fabcloud.io/programmers/summary/ for programming the 412 Only UPDI
JTAG is for ARM (SAMD´s) I compiled a list of UPDI programmers that you can use, based on what you have in your lab

Final project: 3D Golf Cart Design 

Zhirayr Ghukasyan

Benedikt

Charath Chander Natarajan



Tshepho Andrew Keipopele

Palapye Botswana



final project: briquettes press

precious plastic project

Open time

Omar

Latice ICE fpga ICE40

[](Evelyn Cuadrado)

Noel Saji

Shintaro Ito



https://akizukidenshi.com/catalog/default.aspx

Daniel Perez

code used to simulate the Wi-Fi connection

Class



https://news.mit.edu/2024/3d-printer-can-print-with-unknown-material-0408

Lecture Chat

15:05:04 From Patrick - waag To Everyone: Replying to "Message sent before you joined the meeting": for me it says that the video is no longer available. Might be firewall issue

15:05:06 From Marius Araújo To Everyone: Replying to "Message sent before you joined the meeting": This video isn't available any more

15:05:25 From Árni - Fab Lab Akureyri To Everyone: Nice touch Albert Svavar Konradsson Fab Lab Isafjordur, Garrett Nelson:□□

15:05:27 From Pablo Fab Lab Leon To Everyone: □□

15:05:38 From Pérez De La Mora Daniel Alejandro To Everyone: clever dude Marius Araújo, Doaa El-Bess:□□□□

15:05:41 From shintaro ito : Node jpaan kannai To Everyone: I was not half as nervous when the random generator hit me! I was nervous last time... Miriam, Pablo Fab Lab Leon, Adrián - Fab Lab León, Isaac Robles:□□

15:06:53 From Rico Kanthatham To Everyone: yuya is using a real time translator...there will be a slight lag before he answers Nuria Robles | LEON, Adrián - Fab Lab León, Garrett Nelson, Lars Mattern, Svavar Konradsson Fab Lab Isafjordur, Doaa El-Bess:❤ Patrick - waag:□□ Miriam:□□ Adrián - Fab Lab León:□□□□

15:07:14 From Claire (Lake Mac Fab Lab) To Everyone: Replying to "yuya is using a real time translator...there will ...": The future is here

15:07:37 From Rico Kanthatham To Everyone: who else likes Ramen? Noha | Fab Lab Egypt, Árni - Fab Lab Akureyri, Fablab Cuenca/ASQ, andri-fab lab reykjavik, Oscar, Micka - FablabCuenca/ASQ, Iván | Fablab Oulu, Claire (Lake Mac Fab Lab), Isaac Robles, Hiroe_West-harima, Adrián - Fab Lab León, Eman Elkfrawy, Marius Araújo, Evelyn Andrea Cuadrado Guerrero, Kazutoshi / Kitakagaya:❤ Forrest O., Árni - Fab Lab Akureyri:❤□□ Miriam, Árni - Fab Lab Akureyri, Shoko KUDOMI, Ricardo Marques, Patrick - waag, Svavar Konradsson Fab Lab Isafjordur, Adrián - Fab Lab León, Sing:□□ Norella Coronell, Geovanny Fortín, Patrick - waag, Árni - Fab Lab Akureyri, Florimond Chu (FabLab SP), Pradnya S:□□ henk, Árni - Fab Lab Akureyri:□□

15:07:50 From shintaro ito : Node jpaan kannai To Everyone: Japan has so much ramen!

15:08:10 From Rico Kanthatham To Everyone: Replying to "who else likes Ramen?": now i know what to bring to FAB25!! Marius Araújo, Norella Coronell, Árni - Fab Lab Akureyri, andri-fab lab reykjavik, Adrián - Fab Lab León, Lars Mattern:❤ Shoko KUDOMI, Patrick - waag, Árni - Fab Lab Akureyri:□□ Ricardo Marques, Árni - Fab Lab Akureyri:□□

15:08:21 From shintaro ito : Node jpaan kannai To Everyone: I know!

15:08:22 From Claire (Lake Mac Fab Lab) To Everyone: And many different types!

15:08:31 From Anna To Everyone: Love ramen and personally miss ramen in the US

15:08:34 From Kazutoshi / Kitakagaya To Everyone: □□

15:08:34 From Yosuke Tsuchiya, Kamakura To Everyone: Recommendation; Ramen Jiro https://www.byfood.com/blog/culture/the-cult-of-ramen-jiro

15:08:38 From Evelyn Andrea Cuadrado Guerrero To Everyone: i love ramen!

15:08:39 From henk To Everyone: Replying to "who else likes Ramen?": anything better than schnitzel Adrián - Fab Lab León:❤ Miriam:□□

15:09:00 From Rico Kanthatham To Everyone: Next question...what kind of Ramen do you like?

15:09:17 From Árni - Fab Lab Akureyri To Everyone: Replying to "Next question...what kind of Ramen do you like?": Yes Claire (Lake Mac Fab Lab):□□ Pablo Fab Lab Leon, Lars Mattern, Rico Kanthatham, andri-fab lab reykjavik:□□

15:09:22 From Forrest O. To Everyone: I heard Pebble watches (e-ink, first smartwatch) are coming back.

15:09:23 From Rico Kanthatham To Everyone: Replying to "who else likes Ramen?": @henk i love schnitzel

15:09:30 From Rico Kanthatham To Everyone: Replying to "who else likes Ramen?": we can trade Patrick - waag:□□

15:09:55 From henk To Everyone: Replying to "who else likes Ramen?": after fab25 even you cannot see schnitzel for a while Claire (Lake Mac Fab Lab), Lars Mattern, Rico Kanthatham, Patrick - waag:□□

15:10:25 From Pradnya S To Everyone: Vegetarian □

15:10:45 From Saverio Shanghai To Everyone: I had a delicious Napoli Pizza in the same Tokyo Station once ahaha

15:12:21 From henk To Everyone: Replying to "who else likes Ramen?": be prepaired: next to schnitzel they are very proud of their czech pils... Rico Kanthatham, Adrián - Fab Lab León:□□

15:14:00 From Naoki Hayashi To Everyone: https://en.wikipedia.org/wiki/Golgo_13

15:14:02 From shintaro ito : Node jpaan kannai To Everyone: This man is a famous assassin in Japan (fiction)

15:14:08 From Justyn Woods To Everyone: I love Golgo 13...used to have the game

15:14:16 From Rico Kanthatham To Everyone: Gives "I got your back" a whole new meaning!

15:15:17 From Rico Kanthatham To Everyone: How about PIR?

15:15:25 From Pablo Fab Lab Leon To Everyone: cool! Metal Gera Solid device! ...i must start earn... take:□□

15:15:29 From Adrián - Fab Lab León To Everyone: Replying to "How about PIR?": Better the Doppler radar

15:15:47 From Rico Kanthatham To Everyone: Replying to "How about PIR?": yeah...PIR will see everyone

15:15:58 From Fab Lab Barcelona To Everyone: Andrew Mark here @FLB has researched this recently. He found this one, which just came out: https://www.seeedstudio.com/MR60BHA2-60GHz-mmWave-Sensor-Breathing-and-Heartbeat-Module-p-5945.html

15:16:19 From Rico Kanthatham To Everyone: image recognition?

15:17:20 From Claire (Lake Mac Fab Lab) To Everyone: Replying to "who else likes Ramen?": We call them a chicken schnitty in Australia Árni - Fab Lab Akureyri, Patrick - waag, Rico Kanthatham:□□

15:17:37 From Árni - Fab Lab Akureyri To Everyone: Replying to "who else likes Ramen?": I love australian Claire (Lake Mac Fab Lab):❤

15:17:39 From Garrett Nelson To Everyone: I came across this this week, a DIY drone with SAR, rather advanced, but very cool: https://hforsten.com/homemade-polarimetric-synthetic-aperture-radar-drone.html

15:17:58 From Charlotte Latin To Everyone: I'm Jenna from Charlotte Latin, I'm available for review.

15:18:28 From Dylan To Everyone: simba2.jpg Adrián - Fab Lab León, Árni - Fab Lab Akureyri, Forrest O.:❤ alan, Árni - Fab Lab Akureyri, ihlin:□□ Saverio Shanghai, Árni - Fab Lab Akureyri:□□ Claire (Lake Mac Fab Lab), Árni - Fab Lab Akureyri:□□ Patrick - waag, Pablo Fab Lab Leon, Marius Araújo, Árni - Fab Lab Akureyri, Adrián - Fab Lab León, Luciana Asinari, Eman Elkfrawy, Geovanny Fortín, take, Oscar, Norella Coronell, Mkhitar Evoyan:□□ Nuria Robles | LEON, Árni - Fab Lab Akureyri, Svavar Konradsson Fab Lab Isafjordur:□□ Miriam, Árni - Fab Lab Akureyri, Charath Chandar Natarajan, Ricardo Marques:□□

15:22:07 From Adrián - Fab Lab León To Everyone: Jenna you can use ShareX for example

15:22:13 From Bjartur Leó (Fab Lab Vestmannaeyjar) To Everyone: You can use imagemagik on windows?

15:22:21 From Árni - Fab Lab Akureyri To Everyone: wíth WSL

15:22:45 From Árni - Fab Lab Akureyri To Everyone: Replying to "You can use imagemagik on windows?": With WSL, you can actually make use of a Windows installation

15:22:51 From Bjartur Leó (Fab Lab Vestmannaeyjar) To Everyone: Replying to "You can use imagemagik on windows?": https://imagemagick.org/script/download.php

15:22:55 From Bjartur Leó (Fab Lab Vestmannaeyjar) To Everyone: Replying to "You can use imagemagik on windows?": It is there?

15:23:22 From Árni - Fab Lab Akureyri To Everyone: Replying to "You can use imagemagik on windows?": Install WSL (windows subsystem for linux), from there you install the tools you need

15:23:29 From Patrick - waag To Everyone: Replying to "Jenna you can use ShareX for example": you have also the option in MS word or PPT to import your image than save it as picture pretty useful when you want to add some indication or text on the picture

15:23:30 From Árni - Fab Lab Akureyri To Everyone: Replying to "You can use imagemagik on windows?": Terminal tools and such

15:24:11 From henk To Everyone: http://pub.fabcloud.io/programmers/summary/ Ricardo Marques, Adrián - Fab Lab León, Micka - FablabCuenca/ASQ, Svavar Konradsson Fab Lab Isafjordur:❤ Patrick - waag:□□

15:24:44 From henk To Everyone: all programmers used in previous years

15:25:34 From Adrián - Fab Lab León To Everyone: Replying to "all programmers used in previous years": With all of them you can control the world hehehe ❤ Claire (Lake Mac Fab Lab):□□

15:25:36 From Evert Stefán Jensson To Everyone: about how to program attiny 412 i get to differnt info about how to program it from arduino using programer either use udpi serial programer or jtag dose both work ?

15:25:53 From Adrián - Fab Lab León To Everyone: Replying to "about how to program attiny 412 i get to differnt ...": Only UPDI

15:26:09 From Adrián - Fab Lab León To Everyone: Replying to "about how to program attiny 412 i get to differnt ...": JTAG is for ARM (SAMD´s)

15:26:37 From Evert Stefán Jensson To Everyone: Replying to "about how to program attiny 412 i get to differnt ...": thanks that what i thought Adrián - Fab Lab León:□□

15:27:31 From Jani Ylioja To Everyone: Replying to "about how to program attiny 412 i get to differnt ...": JTAG is also for many older 8-bit avr's

15:27:32 From Patrick - waag To Everyone: everybody else who needed to click simulate 10 times before wokwi did the simulation Forrest O.:□□ DGI, Fab Lab Barcelona:□□

15:27:42 From Svavar Konradsson Fab Lab Isafjordur To Everyone: Replying to "about how to program attiny 412 i get to differnt ...": I compiled a list of UPDI programmers that you can use, based on what you have in your lab: https://fabacademy.org/2025/labs/isafjordur/notes_and_tips/microcontroller-toolchains/#attiny andri-fab lab reykjavik, Adrián - Fab Lab León:❤

15:27:50 From Anna To Everyone: did you try mkdocs serve?

15:28:02 From Anna To Everyone: Or is it HTML?

15:28:32 From Mkhitar Evoyan To Everyone: wrong path

15:28:58 From Steven To Everyone: Seeed Studio has a 24GHz mmWave Radar Sensor for the Xiao boards, retailing for under USD4.50. https://wiki.seeedstudio.com/mmwave_for_xiao/

15:28:58 From henk To Everyone: wokwi and current limiting LED's....

15:29:01 From Magnús - Reykjavík To Everyone: I had an issue with the video preview loading in the VSCode Markdown preview but not the mkdocs serve. I had to change the file path to "../../videos/video" instead of "../videos/video" Patrick - waag:□□ Svavar Konradsson Fab Lab Isafjordur:□□

15:29:07 From tom charlotte To Everyone: Neil, we use the arduino as programmers because our school like a lot of schools has a lot of used arduinos and it faster than making a board. Anna:❤

15:29:18 From Bjartur Leó (Fab Lab Vestmannaeyjar) To Everyone: do ../video

15:29:45 From Garrett Nelson To Everyone: Replying to "about how to program attiny 412 i get to differnt ...": I liked Adam Harris programmer board: https://sheekgeek.org/2022/adamsheekgeek/samd11c-multi-use-board Svavar Konradsson Fab Lab Isafjordur:□□

15:29:52 From Adrián - Fab Lab León To Everyone: Replying to "about how to program attiny 412 i get to differnt ...": @Jani Ylioja for the older AVR is the ISP

15:29:59 From tom charlotte To Everyone: will make sure that it is clear

15:30:17 From shintaro ito : Node jpaan kannai To Everyone: Mini golf! That sounds like fun!

15:30:27 From Patrick - waag To Everyone: FabAc survey: ramen > mini golf shintaro ito : Node jpaan kannai, Árni - Fab Lab Akureyri, Adrián - Fab Lab León, take, Fab Lab Barcelona:□□ Ricardo Marques:□□ Mkhitar Evoyan, Árni - Fab Lab Akureyri:□□ Adrián - Fab Lab León, Árni - Fab Lab Akureyri:□□

15:30:45 From Árni - Fab Lab Akureyri To Everyone: You cant eat minigolf Patrick - waag, Adrián - Fab Lab León, Mkhitar Evoyan:□□

15:31:11 From tom charlotte To Everyone: go minigolf. - big hit with grandchildren (4 year old love it) Jeremy Losaw:❤

15:31:13 From Jani Ylioja To Everyone: Replying to "about how to program attiny 412 i get to differnt ...": @Adrián - Fab Lab León I used jtag already 2006 and it was de facto at the time :D

15:31:25 From Adrián - Fab Lab León To Everyone: Replying to "about how to program attiny 412 i get to differnt ...": Oh wow

15:32:16 From Svavar Konradsson Fab Lab Isafjordur To Everyone: Replying to "I had an issue with the video preview loading in t...": @Jóhannes , @olof , @Hogni Fabisa , maybe this could fix the problem we've had with video links Hogni Fabisa:□□

15:32:20 From Marius Araújo To Everyone: Can’t cheat, but I bet it can be hacked Patrick - waag, Svavar Konradsson Fab Lab Isafjordur:□□

15:32:47 From Árni - Fab Lab Akureyri To Everyone: {8601A498-1EAA-4218-938C-5BC423F83366}.png Patrick - waag, Hiroe_West-harima:□□ Hogni Fabisa:□□ Dylan, Yosuke Tsuchiya, Kamakura:□□ Marita Chang, Claire (Lake Mac Fab Lab):□□ Marius Araújo:□□ Rico Kanthatham, Adrián - Fab Lab León, Pablo Fab Lab Leon, Shoko KUDOMI:□□

15:33:32 From Jani Ylioja To Everyone: Replying to "about how to program attiny 412 i get to differnt ...": Most, if not all, of the ic you probably could program with both but jtag-ice was amazing in debugging Adrián - Fab Lab León:❤

15:34:34 From henk To Everyone: Replying to "I had an issue with the video preview loading in t...": img paths in markdown are generated by SSG. When you put html code for video in markdown, it isn't. So thats the reason they have different paths. Ricardo Marques, Garrett Nelson, Adrián - Fab Lab León:□□ Svavar Konradsson Fab Lab Isafjordur:□□ Forrest O.:□□

15:42:22 From Rico Kanthatham To Everyone: "breadboards are allowed"!!!! Claire (Lake Mac Fab Lab), saheen palayi, Charlotte Latin:❤ Luis Díaz-Faes - A Industriosa, shintaro ito : Node jpaan kannai, Charlotte Latin:□□ Jeremy Losaw:□□ Adrián - Fab Lab León, Miriam, Hiroe_West-harima, Fab Lab Barcelona:□□ Ricardo Marques, Patrick - waag, Marita Chang:□□

15:42:46 From Garrett Nelson To Everyone: "Breadboarding is not Illegal" Fab Lab Oulu:❤

15:42:50 From Rico Kanthatham To Everyone: Replying to ""breadboards are allowed"!!!!": breadboard club members can now speak freely! Adrián - Fab Lab León, Garrett Nelson:□□

15:43:12 From Claire (Lake Mac Fab Lab) To Everyone: Replying to ""breadboards are allowed"!!!!": breadboards are good for testing something out quickly

15:43:22 From Pablo Fab Lab Leon To Everyone: Replying to ""breadboards are allowed"!!!!": First rule in the Breadboard Club... Claire (Lake Mac Fab Lab):□□ Marius Araújo:□□ Miriam:□□

15:43:25 From Charlotte Latin To Everyone: we like breadboards for newbies

15:43:31 From Rico Kanthatham To Everyone: Replying to ""breadboards are allowed"!!!!": ...shhhhhhhh

15:43:38 From Rico Kanthatham To Everyone: Replying to ""breadboards are allowed"!!!!": □□

15:43:40 From saheen palayi To Everyone: Replying to ""breadboards are allowed"!!!!": yes I heard it right :)

15:43:54 From saheen palayi To Everyone: Replying to ""breadboards are allowed"!!!!": where is Adrian

15:44:13 From shintaro ito : Node jpaan kannai To Everyone: Fire hazards existed in addition to the laser cutter!It is Spaghetti electronics. Rico Kanthatham:□□

15:44:22 From Adrián - Fab Lab León To Everyone: Replying to ""breadboards are allowed"!!!!": Here!! saheen palayi:□□

15:44:37 From jakob To Everyone: a friend of mine once did not have the resistors he needed so he just soldered together those resistors he had available in a dead bug either in parallel or in row until the resulting resistance was as he needed. Patrick - waag, shintaro ito : Node jpaan kannai, Marius Araújo:□□

15:45:05 From Marius Araújo To Everyone: Replying to ""breadboards are allowed"!!!!": Next: super-glueing smd components Rico Kanthatham, Adrián - Fab Lab León, Miriam:□□

15:45:09 From Lars Mattern To Everyone: Replying to ""breadboards are allowed"!!!!": □□ https://fabacademy.org/2021/labs/bottrop/students/lars-mattern/projects/final-project/IV.%20Prototyping/3_k155id1_74hc595/

15:45:24 From Patrick - waag To Everyone: Replying to "a friend of mine once did not have the resistors h...": how does it go again ?

```
if it is stupid but it works its not stupid ?
```

15:46:04 From Adrián - Fab Lab León To Everyone: Benedict look this final Project https://archive.fabacademy.org/fabacademy2017/fablabamsterdam/students/60/finalprojectpage.html

15:46:13 From Salman To Everyone: Fab academy studen from Barcelona with bike

15:46:29 From Ricardo Marques To Everyone: Screenshot2024-02-12at7.36.42pm_1200x1200.png Marius Araújo:□□□

15:46:29 From Claire (Lake Mac Fab Lab) To Everyone: Replying to ""breadboards are allowed"!!!!": Breadboard + Jumper wire + tape = somewhat stable thing you can move

15:46:43 From Ricardo Marques To Everyone: Replying to "Screenshot2024-02-12at7.36.42pm_1200x1200.png": this scale has the led's under the surface veneer

15:47:04 From Rico Kanthatham To Everyone: Replying to ""breadboards are allowed"!!!!": ..."if you can't fix it with duct tape...you aren't using enough duct tape" Marius Araújo:□□□ Claire (Lake Mac Fab Lab):□□ Doaa El-Bess, DGI:□□ Adrián - Fab Lab León:□□

15:47:06 From Marius Araújo To Everyone: Replying to "a friend of mine once did not have the resistors h...": Sounds perfectly legal in portugal Pablo Fab Lab Leon:□□

15:47:49 From Adrián - Fab Lab León To Everyone: Replying to "Fab academy studen from Barcelona with bike": Here Gustavo https://fabacademy.org/2019/labs/barcelona/students/gustavo-deabreu/projects/__final_project/

15:48:30 From saheen palayi To Everyone: Replying to "I had an issue with the video preview loading in t...": try this solution add these to your mkdocs

```
requirements.txt:
mkdocs-video ~= 1.5.0

for mkdocs  yml:
add the bellow in Mkdocs yml file.

plugins:
  - mkdocs-video:
      is_video: True
      # video_muted: True
      video_controls: True
      css_style:
          width: 100%

mkdocs code:
![type:video](./Videos/Week_03/ppe.mp4){ align=left }

reference example:- https://gitlab.fabcloud.org/academany/fabacademy/2025/labs/kochi/site
andri-fab lab reykjavik, Svavar Konradsson Fab Lab Isafjordur:❤□
```

15:49:06 From Marius Araújo To Everyone: Replying to ""breadboards are allowed"!!!!": Only the good tape (Silo reference) Árni - Fab Lab Akureyri:❤ Rico Kanthatham:□□

15:49:44 From Rico Kanthatham To Everyone: Replying to ""breadboards are allowed"!!!!": "its good in Supply" Marius Araújo:❤

15:50:00 From Jarni Rai Castillo Yarlequé To Everyone: Nice Benedikt.!! (Y)

15:50:31 From saheen palayi To Everyone: Replying to ""breadboards are allowed"!!!!": breadboards are great construct circuits quickly and learn . but while designing products no breadboard rules are good to follow

15:50:47 From Marius Araújo To Everyone: Replying to "Screenshot2024-02-12at7.36.42pm_1200x1200.png": I wanna do that with micro perforation . Any tips?

15:50:56 From Saverio Shanghai To Everyone: I'm asking them

15:51:05 From Claire (Lake Mac Fab Lab) To Everyone: Replying to ""breadboards are allowed"!!!!": We use electrical tape □□ Ricardo Marques:□□

15:51:58 From Patrick - waag To Everyone: Replying to "Screenshot2024-02-12at7.36.42pm_1200x1200.png": I have a teacher whose research is into wood and made transparent and also conductive wood

```
I am currently trying to found the article about it
Ricardo Marques, Marius Araújo:□□
Garrett Nelson:□□
```

15:52:06 From Pablo Fab Lab Leon To Everyone: cool website! Doaa El-Bess:❤

15:52:30 From Ricardo Marques To Everyone: Replying to "Screenshot2024-02-12at7.36.42pm_1200x1200.png": I have this scale, from what I can infer it was just milled thinly on the oposite side. no drilling needed

15:53:09 From henk To Everyone: Replying to ""breadboards are allowed"!!!!": Image 2025-02-19 at 155304.png Mkhitar Evoyan, Dylan, Adrián - Fab Lab León, Claire (Lake Mac Fab Lab):□□ Patrick - waag, Ricardo Marques:□□

15:53:25 From Adrián - Fab Lab León To Everyone: Replying to "Fab academy studen from Barcelona with bike": Oh is one of our alumni Alejandro https://fabacademy.org/2019/labs/leon/students/alejandro-ausejo/final%20project%20result.html

15:53:28 From Marius Araújo To Everyone: Replying to "Screenshot2024-02-12at7.36.42pm_1200x1200.png": I’ve seen the transparent wood experiments… but article would be great Ricardo Marques:□□

15:53:34 From Salman To Everyone: Replying to "Fab academy studen from Barcelona with bike": @Adrián - Fab Lab León I mean the student who made bike light, with led through thin layer of wood

15:53:36 From Adrián - Fab Lab León To Everyone: Replying to "Screenshot2024-02-12at7.36.42pm_1200x1200.png": You can see this Project

https://fabacademy.org/2019/labs/leon/students/alejandro-ausejo/final%20project%20result.html

15:53:44 From Adrián - Fab Lab León To Everyone: Replying to "Fab academy studen from Barcelona with bike": https://fabacademy.org/2019/labs/leon/students/alejandro-ausejo/final%20project%20result.html

15:54:20 From henk To Everyone: Replying to "Screenshot2024-02-12at7.36.42pm_1200x1200.png": alex fabfoos table back in 2011

15:55:59 From Salman To Everyone: Replying to "Fab academy studen from Barcelona with bike": @Adrián - Fab Lab León yes this one, share this it’s a great example I think it’s very useful Adrián - Fab Lab León:❤

15:56:25 From Ricardo Marques To Everyone: Replying to ""breadboards are allowed"!!!!": let's not Forget about the duct tape boat from mythbusters Claire (Lake Mac Fab Lab):❤

15:56:29 From Ricardo Marques To Everyone: Replying to ""breadboards are allowed"!!!!": 56278c7f6b66d11b5672e352.jpg Marius Araújo:□□□

15:57:32 From Patrick - waag To Everyone: Replying to "Screenshot2024-02-12at7.36.42pm_1200x1200.png": Found Sharing in mattermost

15:57:42 From Patrick - waag To Everyone: Replying to "Screenshot2024-02-12at7.36.42pm_1200x1200.png": (general chat)

15:58:29 From Miriam To Everyone: Wooooooowwwww

15:58:45 From Garrett Nelson To Everyone: Very cool Charath

15:58:49 From Dylan To Everyone: spiral-1.jpg Ricardo Marques:□□

15:59:30 From Patrick - waag To Everyone: Replying to "Screenshot2024-02-12at7.36.42pm_1200x1200.png": but this is the TLDR

15:59:31 From Marius Araújo To Everyone: Replying to "Screenshot2024-02-12at7.36.42pm_1200x1200.png": Can you put it the fab network one? I don’t have access to 2025

15:59:33 From Patrick - waag To Everyone: Replying to "Screenshot2024-02-12at7.36.42pm_1200x1200.png": {8CAAB87D-34EE-4F14-8730-5A0B35306226}.png Marius Araújo:□□□

15:59:39 From Terence Fagan To Everyone: @Charath Chandar Natarajan Nice, that is awesome. Pablo Fab Lab Leon:□□ Muheshkumar R:□□

15:59:55 From Patrick - waag To Everyone: Replying to "Screenshot2024-02-12at7.36.42pm_1200x1200.png": can I have invite for that ? □□

16:00:04 From Ricardo Marques To Everyone: Ask Espressif for a WROOM sponsorship □□

16:00:18 From jakob To Everyone: Replying to "Screenshot2024-02-12at7.36.42pm_1200x1200.png": the title is structure - property - function relationships of natral and engineered wood by chaoji chen et al. Marius Araújo:❤

16:00:43 From Neil To Everyone: https://fab.cba.mit.edu/classes/865.21/people/alfonso/finalproject.html

16:00:44 From Marius Araújo To Everyone: Replying to "Screenshot2024-02-12at7.36.42pm_1200x1200.png": □□□♂ dunno how that works

16:00:53 From Pablo Fab Lab Leon To Everyone: OMG....

16:00:58 From Rico Kanthatham To Everyone: Oh wow...that is cool!

16:01:11 From Adrián - Fab Lab León To Everyone: Awesome!! Alfonso Parra!!!

16:01:13 From jakob To Everyone: Replying to "Screenshot2024-02-12at7.36.42pm_1200x1200.png": https://www.nature.com/articles/s41578-020-0195-z

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this should be it.
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16:02:05 From Claire (Lake Mac Fab Lab) To Everyone: Use RGB fans and make it look pretty Ricardo Marques, Patrick - waag:□□ Ricardo Marques, Patrick - waag:□□ Ricardo Marques, Patrick - waag:□□ Patrick - waag:□□

16:02:27 From Patrick - waag To Everyone: Replying to "Screenshot2024-02-12at7.36.42pm_1200x1200.png": Les 6 super review naturla and engineered wood material.pdf Marius Araújo:❤

16:02:30 From Ricardo Marques To Everyone: Noctua has some nice 200mm fans

16:02:36 From Miriam To Everyone: How f1 wind tunnel works https://youtu.be/tNwkANPl3ck?si=YWO3UoDWziLa7yHb Adrián - Fab Lab León, Svavar Konradsson Fab Lab Isafjordur:❤

16:02:41 From Garrett Nelson To Everyone: Make it a rolling road wind tunnel (that's a joke.) Jóhannes:□□ Claire (Lake Mac Fab Lab):□□

16:03:20 From Adrián - Fab Lab León To Everyone: Alberto from León?

16:03:46 From Adrián - Fab Lab León To Everyone: Replying to "Alberto from León?": https://fabacademy.org/2021/labs/leon/students/alberto-gonzalez/presentation.mp4

16:04:50 From Marius Araújo To Everyone: Replying to "Screenshot2024-02-12at7.36.42pm_1200x1200.png": Thank you so much!

16:05:24 From Patrick - waag To Everyone: Replying to "Screenshot2024-02-12at7.36.42pm_1200x1200.png": with pleasure ^^

16:05:50 From Patrick - waag To Everyone: Replying to "Screenshot2024-02-12at7.36.42pm_1200x1200.png": (it's quite heavy so I wasn't sure if zoom accepts it but it do) Marius Araújo:□□□

16:11:19 From Forrest O. To Everyone: Precious Plastic has some open source machine designs that might be helpful. https://community.preciousplastic.com/academy/build/sheetpress Eman Elkfrawy, Marius Araújo, Lambert R.:□□

16:12:30 From Marius Araújo To Everyone: Replying to "Precious Plastic has some open source machine desi...": We’re getting the biopress soon Miriam:□□

16:13:08 From Marius Araújo To Everyone: Replying to "Precious Plastic has some open source machine desi...": The sheet press is still hydraulic

16:13:15 From Dylan To Everyone: Dave Hakkens! Marius Araújo, Svavar Konradsson Fab Lab Isafjordur:❤

16:13:52 From Dylan To Everyone: https://www.youtube.com/@Precious_PlasticHQ/videos

16:13:53 From take To Everyone: This is common for clay 3d printer and have much power to extrude clay

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https://www.amazon.com/Clay-extruder-Upgrade-Printer-Motor-
Rod/dp/B0CP3S4H5L/ref=sr_1_3?crid=1T8Q86M6R9Q46&dib=eyJ2IjoiMSJ9.AKa-
9esPxkgQaj0R3KS0OOG1qv9TRW0As-l6T6GZLull4NVLJtSOfnxZU_MzkWXx-
YvQF12AsEyn6DhveP5Chd1i7ivQlc_rFv1gZytBKWurSK_YrN2BQ_VAzoY38ZqnQshu-B4f6_4rVOezNUtlYS5QyRCY-
KcWiHxKjjlI21xGD1cqQJjonpV2OfGQTRugPjtGoyHDZvfLk5EhCRkreWKDohYyNBxbWXXqvtpzK34.hFkKWxboHy3oUCj
gFNBVGk88D2yQnzTDHu48lUZvIsQ&dib_tag=se&keywords=clay+3d+printer&qid=1739977983&sprefix=cla+3d
+printer%2Caps%2C289&sr=8-3
Svavar Konradsson Fab Lab Isafjordur, Marius Araújo:□□
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16:13:59 From Eman Elkfrawy To Everyone: Replying to "Precious Plastic has some open source machine desi...": you can check their community section there's a lot of people who try to motorize the machines. Marius Araújo:□□

16:14:52 From Marius Araújo To Everyone: Replying to "Precious Plastic has some open source machine desi...": What about the amount of pressure you can get out of those electric motors? I think the hydraulic can get up to many tens of tons...

16:17:08 From jakob To Everyone: I found FAUST: https://faust.grame.fr/

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It is a functional programming language for audio digital signal processing. you can define your dsp pipeline like with a modular synth. the resulting code you can transpile to Cpp and use it for your project.
```

16:17:31 From Julian Silva To Everyone: has anybody used wokwi within visual studio code? Thoughts?

16:17:35 From Jóhannes To Everyone: Replying to "Precious Plastic has some open source machine desi...": depends on what gear you use https://www.dgrelectriccylinder.com/product/dgrht230-heavy-duty-electric-linear-actuator/ Ricardo Marques:□□ Marius Araújo, Garrett Nelson:□□□□

16:18:13 From Jeremy Losaw To Everyone: I started down that road, but never finished

16:18:30 From Jeremy Losaw To Everyone: i think it might be a subscription after the first month

16:18:46 From Árni - Fab Lab Akureyri To Everyone: Replying to "has anybody used wokwi within visual studio code? ...": Tried it, got super confused, ran into the subscription thing and gave up on life

16:19:32 From Jani Ylioja To Everyone: interesting if butterfly registers can be replaced with program to do fast fft

16:20:04 From Julian Silva To Everyone: Replying to "has anybody used wokwi within visual studio code? ...": ahh, got it.

16:20:17 From hongtai To Everyone: a lot of XIAO

16:24:03 From Jeremy Losaw To Everyone: Replying to "a lot of XIAO": a lot of XIAO they are nice boards.. I like them

16:24:23 From Jarni Rai Castillo Yarlequé To Everyone: Nice Jakob!! Jeremy Losaw:□□

16:31:21 From Árni - Fab Lab Akureyri To Everyone: LLM output -> straight to production on a friday. YOLO! Marius Araújo:□□

16:34:04 From Omar Baalbaki To Everyone: Is it better to select one microcontroller with capabilities like WiFi, Bluetooth, and processing power and use it for all my projects, or should I choose a specific microcontroller to each project's unique needs?

16:39:14 From Árni - Fab Lab Akureyri To Everyone: Replying to "Is it better to select one microcontroller with ca...": Honestly, the esp32c3 is such a slam dunk in that regards... so why not?

16:41:29 From shintaro ito : Node jpaan kannai To Everyone: I was very nervous about this share as well again!

There is a Japanese proverb “shiru ha isshun no haji , shiranu ha isshou no haji” (to know is shame for a moment, to not know is shame for a lifetime).

The moment in sharing when you realize that your understanding was wrong is embarrassing, but you learn a lot.

(Forgive me for my English proficiency.□□I've been devoting my brain resources to the most difficult Japanese language in the world.)
Marius Araújo, Claire (Lake Mac Fab Lab), Yosuke Tsuchiya, Kamakura, Doaa El-Bess, Adrián - Fab Lab León, Eman Elkfrawy, Árni - Fab Lab Akureyri, Lei Feng, Nuria Robles | LEON, Patrick - waag, Daniel Osika, Hiroe_West-harima, Svavar Konradsson Fab Lab Isafjordur, Garrett Nelson:❤□ Florimond Chu (FabLab SP), Árni - Fab Lab Akureyri, Patrick - waag:□□

16:43:21 From Marius Araújo To Everyone: Replying to "I was very nervous about this share as well again!...": Great proverb! I empathise shintaro ito : Node jpaan kannai:□□ Nuria Robles | LEON:□□

16:45:44 From Marius Araújo To Everyone: Replying to "Is it better to select one microcontroller with ca...": In theory you should dimension your selection to your needs, but of course, we tend to over budget and under use, and at least you never hit the limits of an over-powered controller Pablo Fab Lab Leon:□□

16:49:11 From shintaro ito : Node jpaan kannai To Everyone: Today is 3d printing! I've installed a nice machine from Bamboo Lab for this day! But I've been too busy, it's still doing placeholders and stuff. □□□□

16:49:27 From Nuria Robles | LEON To Everyone: Replying to "I was very nervous about this share as well again!...": In my first year as a student in FabAcademy, Neil told me: “Don't worry about your English, focus on learning.” ❤ Fablab Ulima - Italo, Tshering Dorji JNWSFL:❤ Patrick - waag, shintaro ito : Node jpaan kannai, Adrián - Fab Lab León:□□

16:50:50 From shintaro ito : Node jpaan kannai To Everyone: cool

16:52:37 From Adrián - Fab Lab León To Everyone: Now is a public domain https://www.3dbenchy.com/3dbenchy-sets-sail-into-the-public-domain/ Claire (Lake Mac Fab Lab):❤

16:53:21 From shintaro ito : Node jpaan kannai To Everyone: This is the type of spaghetti that doesn't make me happy.□□ Daniel Osika, Adrián - Fab Lab León:□□

16:53:49 From Árni - Fab Lab Akureyri To Everyone: Ramen > 3dprinted spaghetti Hiroe_West-harima, shintaro ito : Node jpaan kannai, Tshering Dorji JNWSFL:□□

16:54:00 From Patrick - waag To Everyone: Replying to "This is the type of spaghetti that doesn't make me...": ramen > mini golf > 3D spaghetti shintaro ito : Node jpaan kannai:□□

16:54:15 From Patrick - waag To Everyone: Replying to "Ramen > 3dprinted spaghetti": I was too slow □□ Árni - Fab Lab Akureyri:❤ Marius Araújo, shintaro ito : Node jpaan kannai:□□

16:54:27 From Neil To Everyone: https://www.youtube.com/watch?v=CAwaGuEbM2o

16:55:15 From Jani Ylioja To Everyone: google: "3D printer thermal run fire" to know why most printers shouldn't be left alone over night.

16:55:30 From Jani Ylioja To Everyone: with images :)

16:56:28 From Terence Fagan To Everyone: https://www.youtube.com/watch?v=Dl9rhG5BPrM

16:58:16 From Claire (Lake Mac Fab Lab) To Everyone: Replying to "This is the type of spaghetti that doesn't make me...": Kat in 2023 purposely made her 3D print project stringy, very creative and looks cool https://fabacademy.org/2023/labs/kamakura/students/ekaterina-kormilitsyna/*Assignments*/Week05/#final-result Garrett Nelson:□□

16:58:41 From Neil To Everyone: https://news.mit.edu/2024/3d-printer-can-print-with-unknown-material-0408

16:59:03 From Garrett Nelson To Everyone: Any updates on that project Neil?

16:59:31 From Garrett Nelson To Everyone: Great, thanks!

17:00:15 From Keipopele Andrew To Everyone: Anyone know how to service printers? we could do a video call

17:01:38 From saheen palayi To Everyone: Replying to "Anyone know how to service printers? we could do a...": ✌

17:02:06 From Patrick - waag To Everyone: Replying to "Anyone know how to service printers? we could do a...": I only know for Prusa

17:02:18 From Keipopele Andrew To Everyone: Thanks share contact inbox

17:02:34 From Ricardo Marques To Everyone: https://youtu.be/S9EWITrwcqU?si=Z-fBAcJQzyyNyCcN&t=206

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This clip about slow mo printing has a few clips of fumes coming out of the filament
Marius Araújo, Patrick - waag:□□
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17:02:51 From shintaro ito : Node jpaan kannai To Everyone: @Fab Lab Barcelona I am interested in food safe in 3D printing. I am aware that items made with a 3D printer are NOT FOOD SAFE, is that correct? Also, a while back there was talk about a nylon 680 filament that was also certified by the U.S. Food and Drug Administration (aka FDA) that could be used for edible purposes.

17:03:48 From shintaro ito : Node jpaan kannai To Everyone: Fantastic...

17:05:19 From shintaro ito : Node jpaan kannai To Everyone: Is the fashionable 3d printing fashion you just saw related to FABRICADEMY?

17:06:33 From Patrick - waag To Everyone: So we can just use the files here for the group assignment ?

17:07:29 From Adrián - Fab Lab León To Everyone: Replying to "So we can just use the files here for the group as...": https://fabacademy.org/2020/labs/leon/students/adrian-torres/images/week05/week05.32.jpg shintaro ito : Node jpaan kannai, Keipopele Andrew:□□

17:10:38 From Adrián - Fab Lab León To Everyone: Infill paterns https://fabacademy.org/2020/labs/leon/students/adrian-torres/images/week05/week05.31.jpg Patrick - waag:□□ Jorge Valerio - ESAN, Jarni Rai Castillo Yarlequé:□□

17:12:14 From Ohad Meyuhas To Everyone: Changing the orientation of the element can sometimes deal with some design challenges like angles nad sharp edges

17:14:10 From Garrett Nelson To Everyone: Shapeways went bankrupt

17:15:23 From Marius Araújo To Everyone: https://www.shapeways.com/materials Seems to work here Ricardo Marques:□□

17:15:50 From Aristarco To Everyone: Do anyone knows where to buy the conductive ink to electro plate 3d prints?

17:17:04 From Garrett Nelson To Everyone: Replying to "Do anyone knows where to buy the conductive ink to...": In the US, there's https://caswellplating.com/

17:18:14 From Marius Araújo To Everyone: Replying to "Do anyone knows where to buy the conductive ink to...": https://mgchemicals.com/products/conductive-paint/conductive-spray-paint/shielding-paint/

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Look at the where to buy section, @Aristarco
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17:18:21 From Ricardo Marques To Everyone: I've stumbled on a few papers on Direct Ink Writting 3d printing, does it have any chance of being comercially viable?

17:18:36 From henk To Everyone: Vic Oliver is working on reprap micron at the moment http://blog.reprap.org/ https://reprap.org/wiki/RepRapMicron Adrián - Fab Lab León, Marius Araújo, Garrett Nelson:❤

17:18:59 From Benedikt To Everyone: What is with Rapid Liquid Printing?

17:20:23 From Forrest O. To Everyone: Hey Olifant printing (I’m Oliphant) Marius Araújo:❤

17:20:27 From Patrick - waag To Everyone: the rep/rap evolution tree https://reprap.org/wiki/RepRap_Family_Tree prusa & co are there too Garrett Nelson:□□ Eman

Elkfrawy:□□

17:20:34 From shintaro ito : Node jpaan kannai To Everyone: So big……

17:21:31 From Adrián - Fab Lab León To Everyone: During the Instructos Bootcamp 2023 in Ámsterdam we saw the elephant https://fablableon.org/blog-fab-lab/noticias/resumen_enero_2023/

17:22:11 From Garrett Nelson To Everyone: This is a project I'm keeping an eye on now. DIY SLS, it's gotten to an alpha release phase. https://sls4all.com/ Patrick - waag, Marius Araújo, Eman Elkfrawy:□□

17:22:27 From Marius Araújo To Everyone: Replying to "Hey Olifant printing (I’m Oliphant)": Challenge of the week: scan yourself and print 1/1 on a large z-axis gantry 3d printer :D shintaro ito : Node jpaan kannai:□□

17:23:28 From Benedikt To Everyone: You can also did some multicolor prints with filament change in one layer with a "normal" prusa like the mk4 really easy but its not as clean, if you did it on top layer Adrián - Fab Lab León:❤

17:23:30 From Marius Araújo To Everyone: Replying to "This is a project I'm keeping an eye on now. DIY S...": Ooooo

17:24:37 From Aristarco To Everyone: With multimaterial You can print a different material on supports just below your part and it wont stick to your prints Marius Araújo:□□□□

17:24:43 From Aristarco To Everyone: https://toms3d.org/2024/12/06/try-these-filament-combinations-for-multi-material-and-supports/#:~:text=PLA%20doesn't%20really%20stick,well%20to%20everything%20but%20PLA.

17:25:11 From Patrick - waag To Everyone: Replying to "With multimaterial You can print a different mater...": you also have soluble filaments

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so you don't need to bother cleaning your print anymore
Aristarco:□□
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17:25:20 From Aristarco To Everyone: ie ABS wont stick to PLA leaving better finished parts

17:26:04 From Benedikt To Everyone: Replying to "ie ABS wont stick to PLA leaving better finished p...": Will ASA also work in the same way with PLA?

17:26:33 From Bjartur Leó (Fab Lab Vestmannaeyjar) To Everyone: Replying to "With multimaterial You can print a different mater...": And use flexible materials with solid materiels. Very cool example from Prusa: https://www.printables.com/model/704930-flexible-wrist Aristarco:❤ Patrick - waag:□□

17:26:49 From Aristarco To Everyone: Replying to "With multimaterial You can print a different mater...": In Mexico soluble filament costs 10X PLA Patrick - waag:□□

17:26:59 From Ohad Meyuhas To Everyone: https://www.facebook.com/watch/?v=308914173088207 Kuba movie was all 3D printed with PolyJet

17:27:14 From Adrián - Fab Lab León To Everyone: With a Makerbot Replicator 2 I made this for my final Project https://fabacademy.org/2020/labs/leon/students/adrian-torres/images/week05/week05.45.jpg

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Today we can do it better with a resin printer.
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17:27:43 From Julian Baßler To Everyone: Replying to "ie ABS wont stick to PLA leaving better finished p...": actually recently used abs and pla but they stick to each other quite well, which is why you can print the first layer in pla and print abs on top if you are worried about bad bed adhesion

17:27:54 From Garrett Nelson To Everyone: Replying to "ie ABS wont stick to PLA leaving better finished p...": Try PETG and PLA

17:28:28 From Patrick - waag To Everyone: Replying to "ie ABS wont stick to PLA leaving better finished p...": TPU is the worst for bed adhesion …

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it sticks like hell
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17:30:29 From Julian Silva To Everyone: Replying to "ie ABS wont stick to PLA leaving better finished p...": any recomendations on dissolvanle material other than PVA. i Havent had much luck with it through the years

17:31:06 From Patrick - waag To Everyone: Replying to "ie ABS wont stick to PLA leaving better finished p...": I only know they exist □□ never used them myself

17:34:13 From saheen palayi To Everyone: 3MF are using mostly in Bambu labs

17:34:32 From Adrián - Fab Lab León To Everyone: Replying to "3MF are using mostly in Bambu labs": And Pusa Patrick - waag, Marius Araújo:□□

17:34:52 From Adrián - Fab Lab León To Everyone: Replying to "3MF are using mostly in Bambu labs": Prusa*

17:34:53 From andri-fab lab reykjavik To Everyone: Prusaslicer now supports STEP Adrián - Fab Lab León, Micka - FablabCuenca/ASQ, Svavar Konradsson Fab Lab Isafjordur, Benedikt:❤

17:35:14 From shintaro ito : Node jpaan kannai To Everyone: Fusion 360 Can Handle and Convert Any State of Files: Solid, Surface, Form, Mesh Unlike typical 3D CAD software, Fusion 360’s significant feature is its ability to freely navigate between different modeling formats.

17:35:26 From saheen palayi To Everyone: Replying to "3MF are using mostly in Bambu labs": yea , we can convert it from fusion , and we can save even the slicing settings in the same file using slicer s/w Adrián - Fab Lab León:□□

17:35:34 From Benedikt To Everyone: Replying to "Prusaslicer now supports STEP": finally

17:35:45 From Marius Araújo To Everyone: DXF is such a pain with our architecture students who use auto cad and want to do laser cut maquettes X(

17:35:54 From Adrián - Fab Lab León To Everyone: Replying to "3MF are using mostly in Bambu labs": https://blog.prusa3d.com/3mf-file-format-and-why-its-great_30986/

17:35:58 From Patrick - waag To Everyone: Replying to "DXF is such a pain with our architecture students ...": I know your pain Marius Araújo:□□□□

17:36:02 From jakob To Everyone: again, is amf able to handle continuous surfaces?

17:36:20 From jakob To Everyone: Replying to "again, is amf able to handle continuous surfaces?": i did not hear the complete sentence.

17:36:22 From saheen palayi To Everyone: Replying to "DXF is such a pain with our architecture students ...": broken □□ paths

17:36:45 From jakob To Everyone: Replying to "again, is amf able to handle continuous surfaces?": ok thanks

17:37:00 From Marius Araújo To Everyone: Replying to "DXF is such a pain with our architecture students ...": Curves turned into a million straight lines, also…

17:38:49 From Garrett Nelson To Everyone: Replying to "DXF is such a pain with our architecture students ...": And don't forget 10 different dxf file format versions.

17:38:58 From Marius Araújo To Everyone: Replying to "DXF is such a pain with our architecture students ...": indeed

17:39:12 From Benedikt To Everyone: For something like the arc overhangs this tool is really nice: https://fullcontrol.xyz/#/models/b70938

17:39:19 From shintaro ito : Node jpaan kannai To Everyone: Replying to "Fusion 360 Can Handle and Convert Any State of Fil...": https://help.autodesk.com/view/fusion360/ENU/?guid=MESH-CONVERT-TO-SOLID

17:40:26 From Garrett Nelson To Everyone: OrcaSlicer is probably one of the most advanced open source sliver these days imo.

17:40:38 From Patrick - waag To Everyone: PrusaSlicer just got a really nice update where you can have 9 print beds in 1 project file ! Adrián - Fab Lab León:❤ Marius Araújo:□□□

17:40:58 From henk To Everyone: superslicer is also advanced Garrett Nelson:□□

17:41:25 From Adrián - Fab Lab León To Everyone: Printables ❤

17:41:32 From Benedikt To Everyone: Octoprint also support some auto error detection base on image detection

17:41:59 From EI Taylor To Everyone: Where’s the link to Prusa’s Print farm ?

17:42:04 From Benedikt To Everyone: Replying to "PrusaSlicer just got a really nice update where yo...": Where can I add more print beds?

17:42:51 From Patrick - waag To Everyone: Replying to "PrusaSlicer just got a really nice update where yo...": just show it to the side and it should auto detect

17:44:01 From Patrick - waag To Everyone: Replying to "PrusaSlicer just got a really nice update where yo...": it also works with auto arrange

17:45:17 From Benedikt To Everyone: Replying to "PrusaSlicer just got a really nice update where yo...": thx, you just blew my mind

17:45:41 From Dylan To Everyone: anyone have $100,000 I could borrow Benedikt:□□ Patrick - waag, Oscar, Doaa El-Bess, Marius Araújo:□□

17:46:06 From Ricardo Marques To Everyone: Replying to "anyone have $100,000 I could borrow": You can try to get a credit line with the bank that funds Pablos purchases Marius Araújo:□□

17:46:15 From Marius Araújo To Everyone: Replying to "anyone have $100,000 I could borrow": I’m sure Pablo XD Ricardo Marques:□□

17:47:12 From Adrián - Fab Lab León To Everyone: DICOM to NRRD file CONVERSION

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https://fabacademy.org/2022/labs/uemadrid/students/pedro-chana/assignment05.html
Garrett Nelson:□□
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17:47:32 From Adrián - Fab Lab León To Everyone: Replying to "DICOM to NRRD file CONVERSION https://fabacademy....": 3D printing medical images

17:48:10 From Pérez De La Mora Daniel Alejandro To Everyone: with meshroom, could you use DJI drone photos?

17:48:13 From Svavar Konradsson Fab Lab Isafjordur To Everyone: In Ísafjörður we've successfully used this tutorial to do photogrammetry with Meshroom: https://www.youtube.com/watch?v=yKbyVDK2Ep8 Adrián - Fab Lab León, Oscar, Garrett Nelson:❤ Frosti Gíslason - Iceland- Vestmannaeyjar - Fab Lab:□□

17:48:16 From Marius Araújo To Everyone: Replying to "DICOM to NRRD file CONVERSION https://fabacademy....": That is something I've been looking for!! Awesome, thank you @Adrián - Fab Lab León !!! Adrián - Fab Lab León:❤

17:48:22 From Micka - FablabCuenca/ASQ To Everyone: Replying to "with meshroom, could you use DJI drone photos?": yes Pérez De La Mora Daniel Alejandro:□□

17:48:55 From saheen palayi To Everyone: we used normal powder and IPA mixture to scan using artec leo :), Svavar Konradsson Fab Lab Isafjordur:□□

17:49:12 From saheen palayi To Everyone: {A66A0974-3C51-42BC-81CF-3CC4D9C6E631}.png

17:49:16 From Patrick - waag To Everyone: Replying to "DICOM to NRRD file CONVERSION https://fabacademy....": last week I had a student 3D print a cranium for the medical department of my uni, so they can use it to explain operation procedures to the patient Garrett Nelson:□□ Adrián - Fab Lab León:□□□□

17:49:25 From Marius Araújo To Everyone: Replying to "with meshroom, could you use DJI drone photos?": Reality Capture works quite well for drone imagery Pérez De La Mora Daniel Alejandro:□□

17:49:45 From Matthias To Everyone: https://www.youtube.com/live/AOvorpOD6lQ?feature=shared&t=2123 timestamped multiple bed prints

17:49:47 From Justyn Woods To Everyone: Replying to "DICOM to NRRD file CONVERSION https://fabacademy....": would be cool to see

17:50:08 From Benedikt To Everyone: Just in case that someone will use a scanner from the Creality CR-Raptor series. Make sure that your firmware is UpToDate we notice that we can't use the scanner in the moment without a firmware update. For that you need a Mac pc, an Android Smartphone with some google drive App or an older win 11/10 installation (not updatet since the 15 January 25) Patrick - waag:□□

17:50:20 From Patrick - waag To Everyone: Replying to "DICOM to NRRD file CONVERSION https://fabacademy....": I will try to contact her but no promises □□

17:50:34 From jakob To Everyone: another way to represent 3d objects is gaussian splatting: https://en.wikipedia.org/wiki/Gaussian_splatting

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however, i did not understand it thoroughly. however, many andone can use it.
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17:52:15 From jakob To Everyone: Replying to "another way to represent 3d objects is gaussian sp...": *maby anyone can use it

17:52:50 From Forrest O. To Everyone: Replying to "another way to represent 3d objects is gaussian sp...": I haven't seen that process leading to a "water tight" mesh. It's really neat though for how it represents light refractions, reflections, etc. Garrett Nelson:□□

17:53:23 From Fab Lab Barcelona To Everyone: Is Lidar2d or 3D good for edge detection, like a window from a wall?

17:53:43 From Superfablab Kochi To Everyone: is artec leo lidar?

17:53:46 From Benedikt To Everyone: Some newer Ipad pros also did a really good job

17:55:32 From shintaro ito : Node jpaan kannai To Everyone: As I recall, there was a 3d scanning app from unreal engine a while back that you can do on your phone. https://www.unrealengine.com/en-US/realityscan Ricardo Marques:□□

17:57:12 From Patrick - waag To Everyone: isn't that what they did for one of the latest star wars to recreate deceased actors ?

17:57:19 From Marius Araújo To Everyone: For anyone scanning people, baking flower (nicer to the environment) of talcum powder (not so nice) helps scan hair, which otherwise is too shiny for pulsed light scanners

17:57:20 From Jarni Rai Castillo Yarlequé To Everyone: wuaoooo

17:57:24 From Aristarco To Everyone: Creepy

17:57:31 From shintaro ito : Node jpaan kannai To Everyone: wow Jarni Rai Castillo Yarlequé:□□

17:58:58 From Patrick - waag To Everyone: Replying to "isn't that what they did for one of the latest sta...": https://screenrant.com/rogue-one-tarkin-peter-cushing-return-cgi-explained/

17:59:58 From Marius Araújo To Everyone: Replying to "another way to represent 3d objects is gaussian sp...": Good for visualisation mostly

18:00:19 From Adrián - Fab Lab León To Everyone: Remember, this Saturday Global Open Time is back. 10:00 Am Boston Time More info: https://chat.academany.org/fabacademy-2025/channels/global-open-time

18:01:07 From shintaro ito : Node jpaan kannai To Everyone: Replying to "As I recall, there was a 3d scanning app from unre...": @Neil Recommendation.

18:01:08 From Justyn Woods To Everyone: can you repost the design rules slide

18:01:13 From Evelyn Andrea Cuadrado Guerrero To Everyone: bye . thanks

3D Printing Design Rules

global open time

16:31:22 Von Angel Fang an Alle: Qlone works as well Rico Kanthatham:□□

16:31:29 Von Adrian - Fab Lab León an Alle: Replying to "Qlone works as well": Yes

16:31:42 Von Noel Saji an Alle: Has anyone used a 3D scanning app for Android phones?

16:32:13 Von Evert Stefán Jensson an Alle: Þórarinn what was the name on the app in iphone

16:32:20 Von Silvia Lugo an Alle: Replying to "Has anyone used a 3D scanning app for Android phon...": I don't have iPhone, I tried polycam xD

16:32:51 Von Ashish Joy an Alle: I want to make a voronoi pattern on my designs, i am trying rhino, is that the best option out there??

16:32:58 Von Þórarinn Bjartur Breiðfjörð Gunnarsson an Alle: Polycam looks like it is also for android

16:33:08 Von Adrian - Fab Lab León an Alle: Replying to "I want to make a voronoi pattern on my designs, i ...": Meshmixer

16:33:35 Von Noel Saji an Alle: Replying to "Has anyone used a 3D scanning app for Android phon...": how was your experience using it?

16:33:42 Von Marius Araújo an Alle: Kiri engine app, 3dscanner app, photocatch, all of these work. Photo catch even works with just video, on the Mac

16:33:57 Von Þórarinn Bjartur Breiðfjörð Gunnarsson an Alle: Replying to "Þórarinn what was the name on the app in iphone": https://poly.cam/

16:34:03 Von Ashish Joy an Alle: Replying to "I want to make a voronoi pattern on my designs, i ...": Ok thanks

16:34:14 Von Pablo Fab Lab Leon an Alle: all the apps of photgrametry seems to upload your photos to theis claud, and they process it there. And after minutes or hours, you can Access the obj

16:34:41 Von Silvia Lugo an Alle: F Ricardo Marques, Pablo Fab Lab Leon:□□

16:34:57 Von Þórarinn Bjartur Breiðfjörð Gunnarsson an Alle: □□□□□□□□

16:34:58 Von Marius Araújo an Alle: Replying to "all the apps of photgrametry seems to upload your ...": On your computer, without cloud, you can use photo catch on Mac or reality capture in windows Pablo Fab Lab Leon:□□

16:36:07 Von Ricardo Marques an Alle: We're gonna need a recitation on overclocking Silvia Lugo:☝ Pablo Fab Lab Leon, Þórarinn Bjartur Breiðfjörð Gunnarsson, Adrian - Fab Lab León:□□

16:36:37 Von Ashish Joy an Alle: Ok thanks

16:37:05 Von Ashish Joy an Alle: I was trying on a grasshopper

16:37:35 Von Ashish Joy an Alle: So it doesn't count?□□

16:37:50 Von Þórarinn Bjartur Breiðfjörð Gunnarsson an Alle: It's importand to make models manifold blender can do that.

16:37:52 Von Pablo Fab Lab Leon an Alle: grassopper is great, if you have a voronoi programmed is ok

16:37:58 Von Silvia Lugo an Alle: Replying to "So it doesn't count?□□": of course

16:38:01 Von Adrian - Fab Lab León an Alle: https://blog.prusaprinters.org/three-simple-methods-stylize-3d-models/ Hiroe_West-harima:□□

16:38:16 Von Silvia Lugo an Alle: here we go again Marius Araújo:□□ Adrian - Fab Lab León, Ricardo Marques:□□□□

16:38:23 Von Hiroe_West-harima an Alle: Meshmixer: Is it add on for Fusion?

16:38:35 Von Adrian - Fab Lab León an Alle: Replying to "Meshmixer: Is it add on for Fusion?": It´s outside

16:39:00 Von Adrian - Fab Lab León an Alle: Replying to "https://blog.prusaprinters.org/three-simple-method...": https://blog.prusa3d.com/three-simple-methods-stylize-3d-models_7342/

16:39:03 Von Ricardo Marques an Alle: Prusa slicer has a simplify model tool now. in case anyone needs it.

16:39:04 Von Adrian - Fab Lab León an Alle: Replying to "https://blog.prusaprinters.org/three-simple-method...": better thislink

16:39:40 Von Pablo Fab Lab Leon an Alle: Replying to "Meshmixer: Is it add on for Fusion?": Its in Autodesk website, but can be installed alone, without fusion

16:41:23 Von Rico Kanthatham an Alle: Blender Voronoi Lattice:

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Decimate modifier
Wireframe modifier
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16:41:38 Von Noel Saji an Alle: Could you share that link here

16:41:43 Von Adrian - Fab Lab León an Alle: Replying to "Could you share that link here": https://blog.prusa3d.com/three-simple-methods-stylize-3d-models_7342/

16:41:49 Von Noel Saji an Alle: Replying to "Could you share that link here": Thanks

16:42:10 Von Þórarinn Bjartur Breiðfjörð Gunnarsson an Alle: https://fabacademy.org/2025/labs/isafjordur/students/johannes-andresson/assignments/week05/

16:44:22 Von Rico Kanthatham an Alle: My fabricademy student had some success with Meshroom

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https://class.textile-academy.org/2024/mina-smith/assignments/week02/
Adrian - Fab Lab León:❤
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16:44:25 Von Ricardo Marques an Alle: I found this trick after doing all the scanning xD Adrian - Fab Lab León:

16:44:27 Von Ricardo Marques an Alle: Sense2_ExtraLight.jpg

16:46:02 Von Rico Kanthatham an Alle: I used meshroom too for my Fabricademy assignment...inside...and I tried to even out the light as best I could. The result were not great

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https://class.textile-academy.org/2023/phanuwit-kanthatham/assignments/week02/
Adrian - Fab Lab León:❤
```

16:46:54 Von Ricardo Marques an Alle: Replying to "Sense2_ExtraLight.jpg": Portable lights at full power generally don't have flickering as they're powered directly from low power batteries and don't have to deal with ac frequencies or crappy switching power supplies.

16:47:54 Von Rico Kanthatham an Alle: https://www.capturingreality.com/

16:48:02 Von Pablo Fab Lab Leon an Alle: https://apps.apple.com/es/app/photocatch/id1576081762

16:48:54 Von Adrian - Fab Lab León an Alle: You can make your 3d model of your fab lab https://visitavirtual.fablableon.org/

16:48:58 Von Ricardo Marques an Alle: Fancier 3d scanners these days are adding lasers for very high accuracy

16:49:43 Von Ricardo Marques an Alle: and don't scan black objects,

16:50:02 Von Noel Saji an Alle: @Marius Araújo could you repeat the name of the software you said works with Unreal as well>

16:50:04 Von Ricardo Marques an Alle: Replying to "and don't scan black objects,": https://fabacademy.org/2022/labs/fct/students/ricardo-marques/images/week06/ScanAttempt.gif

16:50:24 Von Marius Araújo an Alle: Replying to "@Marius Araújo could you repeat the name of the so...": Reality Capture

16:50:24 Von Þórarinn Bjartur Breiðfjörð Gunnarsson an Alle: Replying to "@Marius Araújo could you repeat the name of the so...": Think it was this one https://www.capturingreality.com/

16:50:29 Von Ricardo Marques an Alle: Replying to "@Marius Araújo could you repeat the name of the so...": https://www.unrealengine.com/en-US/realityscan

16:50:31 Von Noel Saji an Alle: Replying to "@Marius Araújo could you repeat the name of the so...": Thanks

16:50:58 Von Rico Kanthatham an Alle: Replying to "and don't scan black objects,": yeah...black hair is tough. Trick...put baby powder in your hair Adrian - Fab Lab León:❤ Ricardo Marques:□□

16:51:29 Von Milliam an Alle: Just wear a hat

16:51:30 Von Þórarinn Bjartur Breiðfjörð Gunnarsson an Alle: https://www.instructables.com/Milkscanner-V1.0/

16:51:45 Von Þórarinn Bjartur Breiðfjörð Gunnarsson an Alle: Image 2025-02-22 at 155141.png Rico Kanthatham, Jhasmin Giovanna Ayala Rojas, Ricardo Marques:□□

16:51:55 Von Þórarinn Bjartur Breiðfjörð Gunnarsson an Alle: Every thing is normal here

16:52:44 Von Þórarinn Bjartur Breiðfjörð Gunnarsson an Alle: There good floor space for a swiming pool in Leon. Just saying...

16:53:04 Von Ricardo Marques an Alle: baking flour, not baking soda. Marius Araújo, Silvia Lugo:□□

16:53:20 Von Marius Araújo an Alle: Replying to "baking flour, not baking soda.": indeeed

16:54:12 Von Ricardo Marques an Alle: Replying to "baking flour, not baking soda.": suspended flour is also technically super flamable almost explosive. so do be careful dusting it near fire sources

16:54:18 Von Marius Araújo an Alle: Dry shampoo, awesome tip, will try that for sure!! Rico Kanthatham, Pablo Fab Lab Leon:□□

16:55:22 Von Ricardo Marques an Alle: start thinking on electrical systems if you have some free time too, electronics design is coming up next.

16:56:15 Von Pablo Fab Lab Leon an Alle: Super tip cardboard prototype

16:56:17 Von Marius Araújo an Alle: Yep. Find out how many mA your sensors need. Power management was part of my downfall Ricardo Marques:⚡

16:56:31 Von Þórarinn Bjartur Breiðfjörð Gunnarsson an Alle: https://fabacademy.org/2023/labs/isafjordur/students/svavar-konradsson/final-project/overview.html Adrian - Fab Lab León, Marius Araújo:❤

16:56:37 Von Marius Araújo an Alle: Replying to "Yep. Find out how many mA your sensors need. Power...": Inputs and outputs need mA

16:56:53 Von Þórarinn Bjartur Breiðfjörð Gunnarsson an Alle: Svavars final project traking page sample

16:57:51 Von Rico Kanthatham an Alle: {88336019-2407-4F02-91BB-E044716E2CD6}.png Adrian - Fab Lab León:❤ Marius Araújo:□□ Ricardo Marques:□□ Pablo Fab Lab Leon:□□ Þórarinn Bjartur Breiðfjörð Gunnarsson:□□

16:58:23 Von Rico Kanthatham an Alle: {28A827AC-DC7C-4958-BE60-0462B0014F2B}.png Adrian - Fab Lab León:❤

16:58:31 Von Þórarinn Bjartur Breiðfjörð Gunnarsson an Alle: Replying to "{88336019-2407-4F02-91BB-E044716E2CD6}.png": perfect cardboard is king!

16:58:52 Von Ricardo Marques an Alle: Replying to "{28A827AC-DC7C-4958-BE60-0462B0014F2B}.png": why is the stepper censored xD Rico Kanthatham:□□

16:59:14 Von Þórarinn Bjartur Breiðfjörð Gunnarsson an Alle: Replying to "{28A827AC-DC7C-4958-BE60-0462B0014F2B}.png": Do we want to know?

16:59:24 Von Rico Kanthatham an Alle: {30F230C3-6554-421E-9D1A-74BCF4D73AF6}.png Adrian - Fab Lab León:❤

16:59:39 Von Rico Kanthatham an Alle: Replying to "{28A827AC-DC7C-4958-BE60-0462B0014F2B}.png": @Ricardo Marques too sexy Pablo Fab Lab Leon:□□

16:59:50 Von Ricardo Marques an Alle: Replying to "{28A827AC-DC7C-4958-BE60-0462B0014F2B}.png": good point, they're in japan after all

17:00:01 Von Rico Kanthatham an Alle: Replying to "{28A827AC-DC7C-4958-BE60-0462B0014F2B}.png": ...Bhutan :) Ricardo Marques:□□

17:01:28 Von Rico Kanthatham an Alle: Marius...making some money?

17:01:46 Von Milliam an Alle: Replying to "Marius...making some money?": Why not print some money

17:01:58 Von Marius Araújo an Alle: Replying to "Marius...making some money?": No, just my regular job. Small things have been an isue

17:02:01 Von Marius Araújo an Alle: Replying to "Marius...making some money?": issue

17:02:08 Von Ricardo Marques an Alle: Replying to "Marius...making some money?": my favourite print Money gif

17:02:17 Von Marius Araújo an Alle: Replying to "Marius...making some money?": Resorting to a micro-CT soon

17:02:25 Von Milliam an Alle: Replying to "Marius...making some money?": Hey that looks like me Ricardo Marques:□□

17:02:46 Von Ricardo Marques an Alle: □□

local lecture

examples for printing processes

https://duckduckgo.com/?q=mediated+matter+group
https://duckduckgo.com/?q=Neri+Oxmann

manual gcode generation

https://github.com/DiatomStudio/CodeThread/ https://hackaday.com/2024/12/28/full-color-3d-printing-with-polydye-and-existing-inkjet-cartridges/
https://www.youtube.com/watch?v=24wqZIpggSg
https://www.youtube.com/watch?v=QxSLQ5wVDrQ&t=684s
https://github.com/DiatomStudio/CodeThread/
https://www.techtarget.com/searchenterpriseai/definition/neural-radiance-fields-NeRF

Free Universal Construction Kit

recitation AI

https://fabacademy.org/2025/recitation/AI/index.html

Crail Lyu

slides Embedded AI/ML Crail Lyu

cutting AI down to size

Advanced AI for Fabacademy

SenseCraft

Valdemar Danry

https://valdemardanry.com/

slides: Design

Olivia Seow

https://www.oliviaseow.com/

text to CAD

chat aus zoom

recitation chat

15:02:33 Von Crail Lyu an Alle: https://www.science.org/doi/epdf/10.1126/science.adw7713

15:09:00 Von jakob an Alle: What does "Processing" refer to in the previous slide in the edge AI block?

15:10:35 Von henk an Alle: can somebody repost the url crail put in the chat?

15:10:51 Von Patrick - Waag an Alle: Replying to "can somebody repost the url crail put in the chat?": https://www.science.org/doi/epdf/10.1126/science.adw7713 jakob:□□

15:11:02 Von Fablab TU Ilmenau an Alle: https://www.science.org/doi/epdf/10.1126/science.adw7713

15:11:05 Von henk an Alle: Replying to "can somebody repost the url crail put in the chat?": thanks :) Patrick - Waag, jakob:□□

15:20:33 Von María Angela an Alle: Hi, Crail! Here the Project we did with AI in January https://youtube.com/shorts/DZHqQWzh_jE?si=QpeocB2y4BdwrSzo Patrick - Waag, shintaro ito : Node japan kannai:□□ Felipe-Guarnizo-Ean-Colombia, Adrián - Fab Lab León, Svavar Konradsson Fab Lab Isafjordur:□□

15:22:38 Von Matthias T. an Alle: Where can I find the Slides?

15:22:56 Von Patrick - Waag an Alle: Replying to "Where can I find the Slides?": fabac schedule page

15:22:58 Von Adrián - Fab Lab León an Alle: Replying to "Where can I find the Slides?": here https://fabacademy.org/2025/recitation/AI/index.html shintaro ito : Node japan kannai, Felipe-Guarnizo-Ean-Colombia, Matthias T., Milliam:□□

15:23:46 Von shintaro ito : Node japan kannai an Alle: Can I ask a basic question to clarify?

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Is it correct that Edge AI is an approach that aims to speed up inference by running AI
algorithms on or near the device where the data is generated, and TinyML is an approach that
focuses on enabling inference using ML models within very constrained machine resources?
Patrick - Waag:□□
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15:23:52 Von shintaro ito : Node japan kannai an Alle: @Crail Lyu

15:24:58 Von Matthias T. an Alle: Replying to "Where can I find the Slides?": did not recognize that there are three links for slides. thank you :) Adrián - Fab Lab León:□□□□

15:30:41 Von shintaro ito : Node japan kannai an Alle: IoT to AioT!

15:30:42 Von Þórarinn Bjartur Breiðfjörð Gunnarsson an Alle: Thank you!

15:30:45 Von Adrián - Fab Lab León an Alle: Thank you Crail!!

15:30:56 Von Matthias T. an Alle: Tahnk you Crail!

15:31:23 Von Milliam an Alle: □□

15:31:50 Von María Angela an Alle: □□

15:31:55 Von shintaro ito : Node japan kannai an Alle: Thank you @Crail Lyu Your presentation was clear and exciting!

15:33:26 Von henk an Alle: some sidenotes on the fantasy of a digital confidante "Friend’s AI chatbots have issues — and they want your help" https://www.theverge.com/2024/12/9/24315126/friend-pendant-artificial-intelligence-companionship-avi-schiffmann

15:33:49 Von henk an Alle: thanks crail :)

15:36:23 Von Milliam an Alle: Replying to "some sidenotes on the fantasy of a digital confida...": 20250224233617.jpg Camila Luna, Adrián - Fab Lab León, Patrick - Waag:□□

15:43:10 Von Pablo Fab Lab Leon an Alle: great! superfun!

15:43:15 Von Marita Chang an Alle: Thank you Crail! Nice to hear you!

15:45:26 Von henk an Alle: Replying to "some sidenotes on the fantasy of a digital confida...": Image 2025-02-24 at 154519.png Pablo Fab Lab Leon, nuria:□□ Patrick - Waag:□□

15:46:24 Von Þórarinn Bjartur Breiðfjörð Gunnarsson an Alle: Thanks very interesing, saw this in the hiden slides many interesting thing there.

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https://docs.google.com/presentation/d/1vRX-7fXc-CMTDkIFwY-3Iv5qMPvseI-
tKAd0yQUXc4o/edit?pli=1#slide=id.g305a86cec94_0_246



Jarni Rai Castillo Yarlequé, Adrián - Fab Lab León:□□
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15:46:29 Von Þórarinn Bjartur Breiðfjörð Gunnarsson an Alle: rect7.png olof, Patrick - Waag, Adrián - Fab Lab León, Yosuke Tsuchiya, Kamakura, Pablo Fab Lab Leon:□□

15:49:41 Von Ricardo Marques an Alle: □□

15:49:52 Von Omar Baalbaki(SK 7) an Alle: Wow

15:53:09 Von Adrián - Fab Lab León an Alle: ❤

15:55:06 Von Patrick - Waag an Alle: we are back to sushi □□ shintaro ito : Node japan kannai, Doaa El-Bess, Þórarinn Bjartur Breiðfjörð Gunnarsson:□□

15:56:37 Von Þórarinn Bjartur Breiðfjörð Gunnarsson an Alle: Replying to "we are back to sushi □□": "Sushi swiming in water" Adrián - Fab Lab León:□□ Patrick - Waag:□□

15:56:41 Von Þórarinn Bjartur Breiðfjörð Gunnarsson an Alle: Replying to "we are back to sushi □□": Image 2025-02-24 at 145617.png Ricardo Marques:□□

15:56:42 Von shintaro ito : Node japan kannai an Alle: That cutting edge technology was called “the ART of”. It appears to be creating ART by means of exactly that word, ART!

15:56:43 Von Pablo Fab Lab Leon an Alle: Great!!! thank you all!

15:56:47 Von María Angela an Alle: □□

15:56:54 Von david.taylor an Alle: Thank you. Great job!

15:56:55 Von Adrián - Fab Lab León an Alle: Awesome!! Thank you

15:56:59 Von Tshering Dorji an Alle: very insightful presentation thank you □□□□

15:57:02 Von Þórarinn Bjartur Breiðfjörð Gunnarsson an Alle: Thank you!

15:57:05 Von Jorge Valerio - ESAN an Alle: Thank you all!

15:57:10 Von Pablo Fab Lab Leon an Alle: If you have ChatGPT, you can try my GPT called "Fab Academy", to help you with many things: assessemt, find projects, ask questions...all related with Fab Academy: https://chatgpt.com/g/g-677d77f1c3d48191845892a4e5474fc6-fab-academy Naldi, María Angela:❤ Adrián - Fab Lab León:□□

15:57:14 Von olof an Alle: So awesome! Thank you

15:57:27 Von nuria an Alle: Thanks both for this recitation!!!

15:57:29 Von Omar Baalbaki(SK 7) an Alle: Thank you

15:57:33 Von Tshering Wangzom JNWSFL bhutan an Alle: Thank you. Learned a lot of new things.

15:58:01 Von Marita Chang an Alle: Thank you Olivia and Valdemar!

15:58:34 Von Diarmuid Kelly an Alle: That was great, very informative thanks.

15:58:48 Von Steven an Alle: Specialized LLMs are starting to become available, e.g. CADgpt, Electronics-Advisor GPT.

15:59:35 Von Adrián - Fab Lab León an Alle: https://chatgpt.com/g/g-lKqZ8xM5H-electronics-production-assistant

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Electronics Production Assistant
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15:59:58 Von henk an Alle: i still don't like food that comes out of a microwave Milliam, Adrián - Fab Lab León:☝

16:00:54 Von henk an Alle: microwave = AI years ago

16:02:15 Von Ricardo Marques an Alle: Meta recently argued in court that it didn't do anything ilegal because it didn't seed the books it torrented □□ Patrick - Waag:□□

Galvanizing

Notes from Jakob (may need refinement)

- copper sulphate
- solution a (copper sulphate)
- solution b
- solution c: caustic soda and formaldehyde

heating plate

- medium to be electroplated
- monodistilled (once distilled) water
- fill with water
- heating plate underneath (with magnetic stirrer)
- put thermometer (sensor) on top
- heat to 50 degrees
- add ingredients according to recipe in order.
- todo: translate recipe

pre-treatment of plate

- hso degreaser
- caustic soda and disodium tasylate plus something like fit
  - degrease
- this forms very small oxide layers. we want to rinse these off
- rinse (with water)
- put the piece in solution
- how thick should the layer be?
- 3 to 8 µm per hour
- the bath is set to slow. why? because the bath is there to do selective coating. that means you want to coat one part and not others.
- 3d printed circuit boards can also be made with it. can be injection molded and then coated in electroplating
- 3d plastic: copper particles in plastic. expose with a laser and electroplate.
  - 3d mid
- process only works because there is a bit of copper on the surface. the copper acts as a catalyst.

if i now want to electroplate a sheet, i have to dip it in a solution beforehand so that a metal layer is deposited on it.

- the following would be possible:
  - palladium, silver etc. the only question is how to get it onto the surface
- we use palladium because it's a very good catalyst. it's a very good catalyst because it can be plated with

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