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# VISIONEN

## HEAT



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# Editorial

ברוכים הבאים, טייערע וויזינען ליינער,

Welcome to the summer edition! I expect it to be nice, warm, sunny, and pleasant outside the day this issue comes out, as changing from previous years we publish this outside of the lecture time. So read this on your balcony, will you?



In this iteration of the best newspaper in Zurich, Gurnellen and Chongqing, we will be discussing many important summer subjects such as: What random places can I reach by bribing the SBB with 2700 franks, how do I avoid rotting in a bunker, which railway system is the coolest and what is the president doing with all those chicks?

Prepare yourself a lemonade, sell your kidney and come on a journey with us traversing the summer beauty of Switzerland! Alternatively, consider actually studying for your exams that are rapidly approaching and stop procrastinating >:({

### For our English readers:

Es ist endlich Sommer! Es ist ideales Wanderwetter und ich hoffe, dass ihr diese Edition in der Sonne am See lest und nicht im HG an einem lauten Lernplatz am verrotten seid. Für den Fall, dass ihr einen freien Tag habt, könnt ihr in dieser Ausgabe lernen, wo man mit einem wunderschön teuren GA hinkommt, zu welchen Seen man reisen soll, wie man es verhindert, im dritten Weltkrieg zu landen und was sich bei PAKETH tut.

Ich wünsche allen ausser dem einen im Pub, der mir mit Gewalt gedroht hat, weil ich gut über Stalin geredet habe, viel Spass beim Lesen dieser Ausgabe.

גאט נטוג א טאה,

Benjamin Gruzman

# Präsikolumne

JONAS - THE SEMESTER HAS PASSED, LIKE THE ARTICLE DEADLINE

Dear VIS Members,

Wow, what a semester it's been! Our theme this time is Heat, and while May's weather hasn't quite matched the vibe, we've certainly turned up the temperature with our activities.



We kicked things off with our offsite, diving deep into discussions about VIS's direction for the next five years. We even tackled contingency plans—like what we'd do if the Kontaktparty couldn't happen (fingers crossed it never comes to that!). Of course, it wasn't all serious; we had our share of fun too. If you haven't seen the Instagram Reel yet, you're missing out.

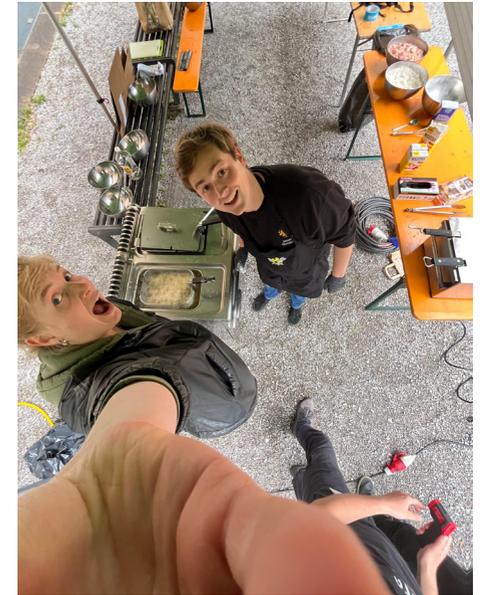
Teaming up with VeBiS and thanks to Eraneos's sponsorship, we hosted a Swedish Night filled with laughter and an impressive number of meatballs. It was a blast!



Because organizing VISTA wasn't enough, I decided to add another event to the mix: the Presidential Fried Chicken & Hot Sauce Tasting. Sonja, the AMIV President, joined me in breading the chicken. Most sauces were manageable, but the last few? Let's just say they had people reaching for milk and making some unforgettable faces. A spicy success!



Let's not forget the Board-Football tournament organized by VIAL. VIS managed to rally a decent number of board members, even though our football skills were, let's say, a work in progress—except for Gamal, who clearly missed his calling. We lost every match except one, but it was the one that truly mattered: our victory against AMIV. That win felt like a championship!



And finally, my main event this semester: VISTA truly brought the heat to the airport. We grilled heaps of meat and veggies, and approximately 600 liters of beer were enjoyed. A massive shoutout to the incredible team and the 100+ VIS helpers who made it all possible. Your efforts didn't go unnoticed, and it's heartening to hear the positive feedback.

As we head into the study phase, I hope you find a balance between productivity and relaxation. And if you see me around, don't hesitate to say hi!

Cheers,  
Jonas

# Hopokolumne

The semester is in full swing, and so is your University Politics Committee at VIS! We're excited to give you a few updates on what we're currently up to:

After a successful test run in the "Introduction to Programming" course, our proposal to implement anonymized exams across D-INFK has officially been accepted by the Teaching Committee (UK). This means that students' identities will be concealed during the grading process. This helps reduce unconscious bias and reinforce fairness in assessment.

In response to the longstanding student criticism of NumCS, we advocated for change, and we are pleased to report that progress has been made. During recent UK meetings, it was confirmed that the flipped-classroom format will be replaced by a traditional lecture structure (4V+2U) and that the course content will undergo a comprehensive overhaul.

Since the last Hopokolumne, ETH has released a manual for PAKETH. While its 43 pages are too long to summarize here, you can find the full document on the official ETH website (don't worry, there's a one-page summary at the beginning). PAKETH will bring significant changes to the curriculum, making it a rare opportunity for us to push for broader improvements that would otherwise be difficult to implement. Thus our responsible taskforce is already working on proposals to improve the overall structure of our study program, which we plan to discuss with the department in the near future.

Behind the scenes, we are also preparing this year's Bachelor Graduation Ceremony—



Everyone who has graduated since last year's ceremony will soon receive an email with more information.

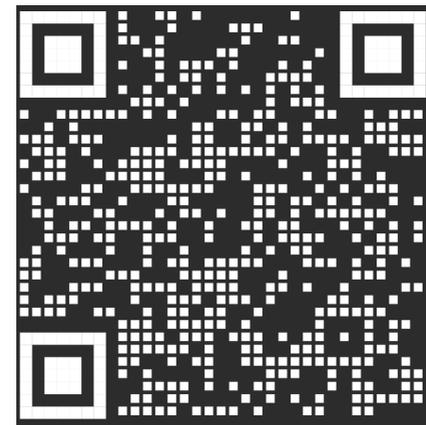
Meanwhile, the Ethics in CS task force hosted the second edition of the Debug Society Film Festival, along with the "Dilemma of the Month" event and the traditional Ethics Dessert.

Lastly, we have also selected the winners of the VIS Teaching Award. This iteration we have introduced a few improvements: Each student received a personalized voting link covering all first- and second-year courses they're enrolled in—even if they are from other departments or are repeating a course. To ensure the awards truly reflect student feedback, awards are only given when a course receives a significant number of votes. This means that some courses will have no winner this year.

As you can see, we're working on some exciting projects at VIS's HoPo! If you're interested in any of these projects or have other matters you'd like to discuss, feel free to reach out to us at any time at [hopo@vis.ethz.ch](mailto:hopo@vis.ethz.ch) or stop by one of our meetings! ■

# Connections

BINARY SEARCH	EDIT DISTANCE	LINEAR SEARCH	EXPONENTIATION BY SQUARING
MAX ELEMENT	KRUSKAL ( $E = N$ )	BST LOOKUP	INSERTION SORT
SINGLE PASS ARRAY	NESTED LOOPS	BUBBLE SORT	BINARY HEAP INSERTION
FFT	HEAP SORT	MERGE SORT	TWO-POINTER SCAN



# Ford v Ferrari - A Smoking Hot Film

JOHAN STETTLER – SPEED LIMIT GRANDPA

Having seen over 1,200 films—some multiple times—from classics like *Casablanca*, *Citizen Kane*, and *Jaws*, to modern hits like *Dune*, *Inception*, and *Oppenheimer*, you could say I'm quite the film connoisseur and enjoyer. Watching films is one of my biggest hobbies. Naturally, people often ask me what I'd recommend.

But before I give any recommendations, let's address a common trap: the "film snob" vs "mainstream enjoyer" divide. There's this odd notion that art-house films are automatically better, and that enjoying a blockbuster is a sign of lesser taste. That's nonsense. Loving an action-packed racing film doesn't make you unsophisticated—just like enjoying abstract French dramas doesn't make you superior. It's like comparing desserts to main courses—what's "better" depends entirely on the context and your personal preferences, which are subjective. That said, there is a difference between taste and craftsmanship.

Think of it like food. You might love spaghetti with hot dogs, and that's fine—comfort food is real. But no one can argue it requires the same level of skill and preparation as a beef wellington. Some dishes just take more time, talent, and technique. Same with movies. Not all films are created equal—not just in acting or visuals, but in how scenes are written, how characters are developed, how the story is paced.



And that's why *Ford v Ferrari* (2019) is my go-to recommendation: it manages to be both deliciously entertaining and an absolute masterclass in filmmaking craft.

The film is based on a true story and set in the USA during the 1960s. We follow Carroll Shelby and Ken Miles, two skilled mechanics and accomplished racers. Together, they take on the seemingly impossible task of building a revolutionary race car for Ford—one capable of beating Ferrari at the legendary 24 Hours of Le Mans. At the time, Ferrari had dominated Le Mans, winning six years in a row. They were the gold standard of racing, with elite engineering and world-class drivers.

Ford, on the other hand, was seen as the laughingstock of the automotive world—valuing profit over craftsmanship, with a focus on corporate suits and marketing rather than the passion for building great cars. Still, Shelby and Miles took the challenge head-on, against all odds, determined to prove that passion and craftsmanship could triumph over corporate interests.



At first glance, *Ford v Ferrari* looks like an action-packed racing film with stunning visuals—and it is. The race scenes are beautifully shot, thrilling, and easy to follow without being chaotic or disorienting. And that's coming from a non-car person. I don't know much about motorsport or engines, but this film still pulled me into the world of petrol, squealing tyres, and growling motors. But underneath the roar of engines lies something deeper: a story of friendship, passion, and purpose. Shelby and Miles aren't in it for money or fame. They do it because they have to—because it's their calling. If they don't drive, they feel incomplete. They don't build good cars for recognition, but because they are proud of their craftsmanship. That's something I found deeply relatable.

*Ford v Ferrari* is a film you can just sit back and enjoy. It's filled with dynamic action scenes, well-written characters, and a phenomenal cast. I always forget that Batman himself, Christian Bale, and the Martian scout boy, Matt Damon, are the main cast—they completely disappear into their roles. It's easy to get caught up in the momentum of it all. It'll make you laugh, pull you in, and keep you invested. It's the kind of movie you can put on during a movie night, and everyone will have a great time.

But I recommend it not just because it's solid entertainment. I recommend it because it's a perfect example of what I mean by a better movie. Not better just because it's fun—but better because of how thoughtfully and skilfully it's made. It's not a sequel, not a reboot, and not a superhero film. It's passionate, well-crafted, and (almost) original—something we don't get nearly enough of these days.



My point is the deliberate storytelling of this film. Some movies just have random scenes or dialogue you could leave out—scenes that feel like, "Yeah, we need some action here because we're doing an action movie, after all."

Ford v Ferrari feels thought out. The filmmakers made decisions—smart, intentional ones—about what to simplify, what to change from the real story, what to exaggerate, and what to show visually rather than explain in dialogue.

The more you learn about how the movie was made—through behind-the-scenes interviews, YouTube breakdowns, or fact-checking videos—the more you understand this. Yes, the story is based on real events, but the filmmakers didn't just dump the facts into a script. It's not a documentary. It's a story with a message and a heartbeat.

What struck me most was how the film captures the essence and high stakes of Le Mans—even for those unfamiliar with racing. Portraying the challenge of driving for 24 hours straight—amidst rain, darkness, constant tension, and the ever-present risk of death—without explicitly stating it. It achieves this subtly through various scenes, such as Ken's bedtime story to his son. It's a serene moment that gently conveys the intense concentration, precision, and endurance demanded by races like Le Mans. The storytelling is smart and effective, avoiding any forced or overt explanations. Every single scene is deliberate and serves the narrative. It's a testament to exceptional writing, screenplay, and directing.

What also makes Ford v Ferrari stand out is how it was physically made. Most of the racing scenes were done with practical effects—real cars, real stunt drivers, and real locations. CGI was used sparingly, mostly to fill in backgrounds or recreate a 1960s crowd—but never to fake the core action. Think about how difficult that is. Filming real races, making them feel fast and dangerous, while still making them easy to follow—without sacrificing narrative flow?



And the kicker? None of the races were filmed on the real Le Mans track. The entire setting was recreated elsewhere. Yet you'd never notice. The cinematography and production design are so immersive that it feels completely real.

This is why Ford v Ferrari is my go-to recommendation. It's a film you can laugh with, cheer for, and simply enjoy—but it's also a great entry point into the art of filmmaking. It shows what happens when everything comes together: acting, writing, cinematography, sound, costume, editing—you name it. Maybe, just maybe, after watching it, you'll start to understand why film nerds like me don't just watch films—we live them.

Give it a shot.

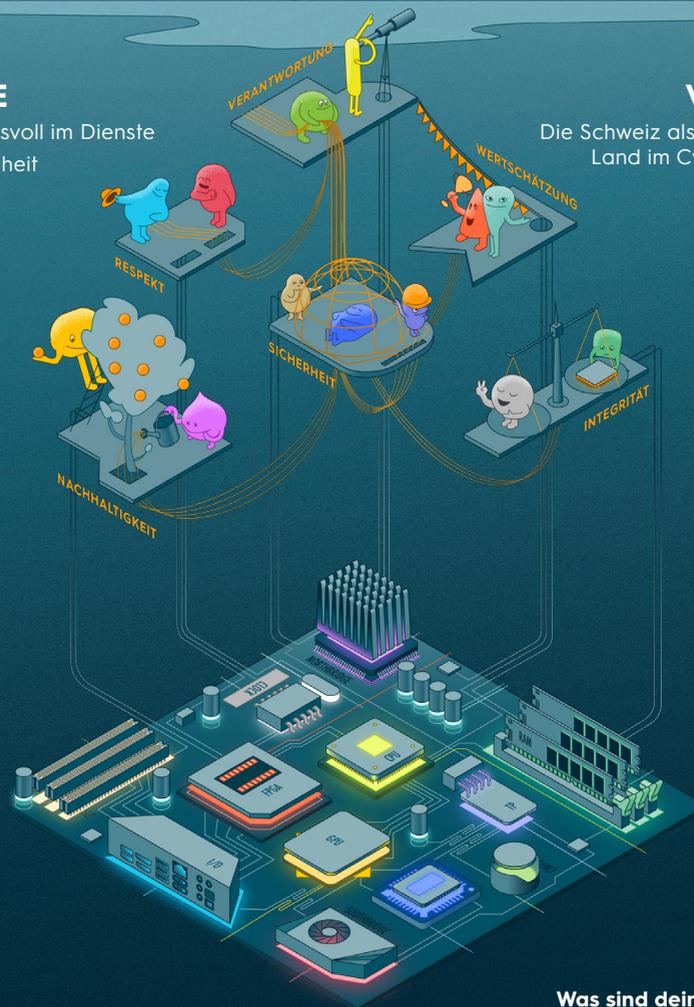


### WERTE

Vertrauensvoll im Dienste der Sicherheit

### VISION

Die Schweiz als sicherstes Land im Cyberspace



Was sind deine Visionen?



Information Security ist deine Leidenschaft und du möchtest mit Gleichgesinnten als Entwickler:in an innovativen Sicherheitslösungen arbeiten. Bei uns kannst du einen Beitrag leisten, die Schweiz zum sichersten Land im Cyberspace zu machen. Erfahre mehr!

# How to change from military to civilian service

MIKAIL GEDIK – I LOVE THE MILITARY ZIVILDIENT

When we planned the articles for the upcoming semester in the Redaktionssitzung [1], this should have been a letter [2] sent from me to Visionen describing the jolly military life. Instead, this will be a little guide on how to switch to civilian service. This has certainly nothing to do with me being a "Zivi" now.

Let's start from the beginning: If you happen to be male and a Swiss citizen, you will one day receive a fancy letter, asking you to join a so-called "Orientierungstag". There, you will be shown by a very demotivated guy what the military is like. Here, only one decision can be made: When you want to start your (potential) service. This is not yet final, but will influence the date of your "Rekrutierung". You receive a very lousy meal and are allowed to go home in the evening. You cannot skip this day.

## Rekrutierung

Next, before your chosen start of service, you will again receive a nice letter called "Marschbefehl", asking you to attend a two-day examination [4]. My examination was rather chill, but bring something to read and/or a powerbank: you'll wait a long time. Don't skip this day. If you do, the military police will eventually find some time to have some "Käfele" with you. These days are by the way the first of your 245 mandatory service days, so after this only 243 are left!



So what happens there? You will take a sports test, which gives you a score. Also, a cognitive test, where you have to memorise a map and some other stuff, and a test of your reaction time (needed if you want to be a cargo driver) [5]. There are also a few medical tests, and you can vaccinate yourself against the basic stuff if you need and want to. If they deem so, or if you want to, you can talk to a psychologist. After all that, either of three things will happen:

a) You are deemed capable for the military ("Militärdiensttauglich"). Based on your scores in the test, you can choose different functions [6], if there are spots available and the officer there sees no issue with it (you can usually talk a bit with them in advance, and they will tell you whether you would get that function).

Then you get to have a five minute chat with that officer, and after that they will finalize your function, and you get to go home. The date of your service start will also be set, and whether you serve in "WK" or "Durchdiener" mode.

b) You are deemed "einfach untauglich", which means you are now in "Zivilschutz" [7]. How that works exactly is a mystery to me, since I didn't get that. But essentially, you have to do some simple stuff a few times per year for your canton (not for the Bund, as in the military!). Don't quote me on any of that, information here might be inaccurate.

c) You are deemed "doppelt untauglich". Then you have no service whatsoever, but have to pay a yearly fee at around 3% of your taxable income. Don't quote me on any of that, information here might be inaccurate.

"Untauglichkeit" is in either of the cases due to medical or psychological reasons. Just telling them that you don't want to do service won't do it, you'll have to be a bit witty [8]. Either way, that was not my path, so ask someone else :) [9]

So where does the "Zivildienst" come into play? This is something you can only do if you were deemed "Militärdiensttauglich". So doing that before the "Rekrutierung" is \*not\* possible, and if you were deemed "einfach/doppelt untauglich" you cannot change either. If you don't want to go to the military because of any reason [10], you have the option to do an "Ersatzdienst" (called "Zivildienst", or "ziviler Ersatzdienst"). This "Ersatzdienst" is as long as 1.5 times your \*remaining\* service days. So just after the "Rekrutierung", you have 243 days left. That times 1.5 gives you 365 days of civilian service, should you change before your service starts. More on how the days are counted later.

## How does the Zivildienst work?

In the military, you get a nice letter before your service starts ("Marschbefehl"), which you cannot object to easily (it is possible, but don't ask me). You cannot choose the date (except the first service, the "Rekrutenschule" aka RS).

In Zivildienst, it is much more simple: You can \*freely choose when and where\* you want to make your service. There are some requirements, for example that you have to work 26 days per year (if you have any left of course), and that, if you have \*not\* completed the RS before you switch, you have to do one long service of 180 days (or six months) in the first 3 years.

The process of finding a job is relatively simple: on their website, there is an infinitely long list of jobs, which you can filter by location and more. If you find a job you like, you can apply to it, as if it were a normal job. If they like you, they will take you, and you can do one of your "Einsätze" there. The jobs itself are normal 9-5 jobs (well it depends on a bit, but the point is that you get to go home in the evening) [11], and you get treated as a normal employee/person (cannot claim the same about the military).

The jobs are of course not just any job, mostly they are in the "Sozialwesen" (schools or "Kitas", meaning you get to be a playmate for kids in the age range of ca. 1.5 years up to ~14?) or "Landschaftsschutz" ("Unkraut jäten"). This is not a complete explanation for everything, but gives you a rough overview. Some things are missing/simplified.

### So how do you change to Zivildienst?

If, and only if, you have been declared "Militärdiensttauglich", you can go to an online website [12], register there, and you are as of then a "Gesuchsteller". As such, you have to visit an "Informationstag", where a guy will explain to you a bit how the civilian service works etc.. This has to happen within three months of when you register as a "Gesuchsteller", and if not, your "Gesuch" will simply expire (you can do a new one afterwards). After this day, you have two weeks to actually express that you have a "Gewissenskonflikt" with the military. You have to prove it, but this is very simple: just by approving to perform 1.5 the amount of your normal service days, enough proof is provided that you don't want to do the military service. As such, you only have to cross a checkmark online, and then you'll be approved for "Zivildienst" in a matter of a few days [13]. As of that point, you can sign a contract for a job in the Zivildienst [14]. You can already search for a job though before you are approved, you just cannot sign a contract for it. I, for example, searched for an employer months before my "Infotag", so I could apply for a job immediately after I was approved. How do the days exactly count in Zivildienst? Let's say you have 243 days left in the military. This includes the weekends, so if you are called for a WK of four weeks, you get 4 x 5 days, plus the three weekends in between. In Zivildienst, it works similarly. If I have 70 days left, I will work  $70/7 = 10$  weeks, and each week XX amounts of hours [15]. In my case, I will work normally each weekday from say 8 to 17 with an hour long break, and go home each evening.

I hope that this article can help you. As always, no guarantees given at all regarding the content.

[1]: Not translating that

[2]: "Feldpost"

[3]: Image of "You are invited to suffer, [join] [join]"

[4]: Including your balls :)

[5]: Which I lousily failed :(

[6]: If you hate being outside, love being inside and work a bit on your laptop: Choose "Büroordonanz". Also, your supervisor tends to be nice to you, since you do their work. Warning: Your job is super boring office things, so not for everybody, but recommended if you're a couch potato as I am. Another tip: If you want to avoid work and don't like shooting, take the "waffenlos" option. You have 4.5 kg or less of baggage, and you avoid doing the weapon maintenance. Obviously, you don't get to shoot.

[7]: Which is very different from "Zivildienst"! The word "Zivi" refers to someone in "Zivildienst"!

[8]: Don't lie too blatantly, they can tell that. Also, if you lie too hard about drugs, they also might send someone to check on you, which you want to avoid.

[9]: I've met a surprising amount of Zivilschützer and "doppel UT" people at ETH

[10]: Formally speaking, you have to have a "Gewissenskonflikt"

[11]: That's not true for some jobs where you work very remotely, such as in the Alps. But you are free "not" to choose such a job, there are "plenty" of others.

[12]: Currently called "Ziviconnect" AFAIK

[13]: This approval is technically a "Verfügung", and you could ask it to be reversed within 30 days, but why would you do that?

[14]: As aforementioned, this is a "Verfügung", if you want to apply for a job within those first 30 days, you'll have to waive the period by email

[15]: The exact amount varies from job to job, but is in the ballpark of 40 to 45 hours



# The Hitchhiker's Guide to the Swiss Generalabonnement

JOSHUA DURRANT - NEW GA OWNER

BENJAMIN GRUZMAN - WASTED HIS TA SALARY ON THE GA

Bored from studying in this summer heat? Want to see something else than the insides of CAB this summer? Well, we have an idea for you. Grab up to four friends and venture into the scary sun for only 20 CHF/Person with the Friends Day Pass for Youth (which essentially is a GA) to explore not only Switzerland but also Liechtenstein, Germany, France, and Italy. We want to showcase some of the more well-known but also more exotic options for a day trip

## Germany

Let's start this list with our neighbours up north, Germany, the land of curry wurst and Döner:

**Konstanz:** Ever wanted to feel like a true Zürcher / Thurgauer? Konstanz is the place to go. A lot of people from Zurich and Thurgau come here to do their shopping. You will find everything you need here, be it food, clothes, books, electronics, etc. Walking along the shore of the Bodensee is also very nice. With a connection every half an hour and a direct one every hour, it is a great spot for a day trip.

**Singen (Hohentwiel):** If you are in the area of Stein am Rhein, you can take a bus up to Singen. Note, only this bus route is included in the GA, not the train that runs via Schaffhausen. Singen overall is your average small German city and falls in the same category as Konstanz, where people from Schaffhausen will come and do

their shopping. The city, like Rheinfelden, is also popular for its dentists.

**Büsingen am Hochrhein:** A German exclave completely surrounded by Switzerland, and not the only one featured on this list. It has an interesting history: In the Middle Ages, it was under the rule of the Habsburgs. In the 17th century, Switzerland challenged the claim, resulting in an escalation of the situation by kidnapping the Austrian Feudal lord at the time. This, of course, caused diplomatic strains, resulting in the Austrians ensuring that the town was kept away from Switzerland. Eventually, it was transferred to the Kingdom of Württemberg during the Napoleonic Wars, which resulted in Germany getting the land. There is not a lot to do there, but there is a good badi with the best curry wurst of the surrounding region.

**Friedrichshafen:** Only reachable by ferry when using the GA, but definitely worth a visit if you are an aviation enthusiast. The city itself feels a lot like other cities on the Bodensee, but the highlights are the Zeppelin and Dornier Museums. Walking along the promenade is also really nice, especially in the evening.

**Rheinfelden (Baden):** Easiest accessible by taking the train to Rheinfelden and walking over to the German side, Rheinfelden (Baden) is a delightful town with a lot of charm and history.

Interestingly enough, the entirety of bus route 7312, taking you from the Swiss side to German side, is in the GA, so you can travel a whole 3.5km (Not that long, but hey still something) within Germany for free to its terminus of Kreiskrankenhaus.

## France

Continuing with our worst neighbour to the west, France, the land of cheese and wine:

**EuroAirport:** The only foreign destination reachable from Basel (besides Leymen, a village with basically nothing in it). Interestingly enough, the road the Posti travels on is within the Swiss tariff zone despite being French territory, and is also fully fenced in. Furthermore, if you wish to catch the cheapest flights (e.g. 20.- to Budapest), you'll have to sleep over at Basel SBB as you can't catch the corresponding bus otherwise from Zurich.

**Léman:** All ships on the Léman from the CGN are included, especially the cross-border navettes and the historical steam boats. Yvoire (from Nyon), Thorne-les-Bains and Évian-les-Bains (from Lausanne-Ouchy) are all decently nice places with historical centres to visit for a small trip.

Watch out: As these boats are partially French, they tend to be late. The historical courses are also usually overcrowded to the point that they don't allow people to enter.

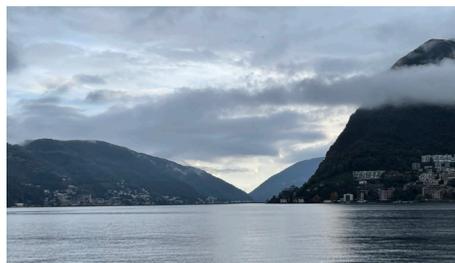
**Pointalier:** Similarly to Singen, this is only reachable by bus, not train. The train is cute tho :(. Adding insult to injury, the bus from Fleurier onwards cruises along the forbidden rail line.

**Gex:** Reachable, but empty. Watch out not to come from Geneva though as that bus is not free! (Why would anyone do that anyway? I mean Geneva is like the worst place in Switzerland) As such, you have to go via Coppet to the stop Divonne, Perdtemps, which is very fitting as going to Gex absolutely is a *perte de temps*.

## Italy

Let us now visit our neighbour in the south, Italy, the country of pizza and pasta:

**Campione d'Italia:** An exclave of Italy completely surrounded by Switzerland, also known as the Mini Monaco of Switzerland. It uses everything from Switzerland, be it banks, currency, hospitals, cell carriers, license plates, you name it. The only Italian service is the police. It too has some interesting history: Starting as a garrison town founded by the Romans, it then traded hands throughout history from the Lombards to the Archbishop of Milan. At the same time, the surrounding land of Ticino was owned by the bishop of Como. As a thank you for helping out in the War of the Holy League, the Pope then gifted Ticino to Switzerland, thus creating the enclave as we know it today. Completely funded by the local casino (which went bankrupt for some time), it is known as a tax haven, as no one has to pay sales and income taxes.



**Domodossola:** A small, cute Italian town, right across the border and very important train hub for Switzerland, as it saves up to an hour in the best case, when travelling from Valais to Ticino. It feels like a small Venice in some sense, minus the water and channels, or like a mini Lugano. The train ride on the Centovalli Railway through the "Hundred Valleys" from Domodossola to Locarno is also a must-see. To be avoided on Saturdays as half of Valais goes there for cheap food.



**Tirano:** The terminus stop of the famous Bernina Express train. A cute little mountain town, with a lot of old churches and historic buildings. It is also a sort of minihub for trains going into Switzerland and going down direction Milan with a nice sight of Lake Como. Hiking in the region is also quite nice.

**Aosta:** Starting from Martigny train station and reachable by bus only, venture on this nearly two-hour ride to the capital of the Aosta Valley region. This bus (line 211) drives exactly twice a day, leaving *Martigny, gare* at 8:30 and getting in *Aosta, autostazione* at 10:20, and leaving *Aosta, autostazione* at 16:15 and getting back to *Martigny, gare* at 18:05, so do not miss it!

Otherwise, this would mean staying the night in Aosta or taking the long way back, taking a grand total of nearly eight hours, consisting of four transfers and five trains. It has a lot of Roman history with the ancient town walls of Augusta Prætoria Salassorum still preserved almost in its entirety and remains of a Roman theatre.

**Livigno:** A skiing village only really accessible via Switzerland by bus. Funnily enough it is one of the co-hosts of the 2026 Winter Olympics so that will be interesting to see how it works. In the summertime, a nice place to bike and hike, but other than that, not much else to see.

## Austria

Going to our neighbours in the east, Austria, the land of Knöddel and the unjustified winner of the ESC.

**Feldkirch:** Only reachable by the cute Liechtensteiner local buses from Schaan and Vaduz, but not the direct RailJet from Zürich.

Be warned though: Liechtenstein is too rich to care about those citizens driving by bus, and thus you might not have as optimal of connections as one is used to from Switzerland. Next time, consider taking an affordable car such as a Lamborghini instead.

**Kajetansbrücke:** From Scuol, you can reach this random bridge in the middle of nowhere in the Austrian Inn-valley with the bus that goes to the Swiss duty-free village of Samnaun. Watch out though, this bus on its way back is full of old people and always gets stopped at the border. The border control is very kind to the pensioners, but each time they see me, I immediately get hit

with “Uuswies bitte!”. As such, I recommend not to smoke marijuana at that bridge if you don’t feel like almost getting pulled out of the bus like me.

**Landeck-Zams, Nauders:** At Kajetansbrücke, you can get out and wait 30 mins at the worst bus stop in Europe to go Landeck-Zams or even almost an hour for Nauders. The former is a main train station on the (Zürich/Lindau-)Bregenz-Feldkirch-Innsbruck-Rest of Austria rail line, but the Railjet is extremely unfortunately not in the GA. It does allow you to save a couple of bucks on the ticket to Vienna though in exchange for 3 hours of your life. Nauders is a ski village and nothing else

## Switzerland and Liechtenstein

Finally, the countries where the GA is actually used: Switzerland, the land of cheese, chocolate, and Roger Federer, and Liechtenstein, one of two double landlocked countries on this planet and one of the few micronations:

**Nendeln:** A small town in Liechtenstein that has one of the three train stations of the country. There are not a lot of things to do here, but if you feel like walking the entire length of the country, this is a good starting point (10/10 would recommend, but gets a bit monotonous after a while)

**Vaduz:** The capital of Liechtenstein, best reachable by the aforementioned cute Liechtensteiner local buses, LIEmobil via Buchs SG or Sargans. The city itself feels very like the average bigger town in the mountains (looking at you, Chur), except for being longer versus wider,

having a big castle on the top of the mountain, and feeling a bit like Paradeplatz with all the banks. If you want a cardio challenge, walk up to the castle and enjoy the view. Vaduz also has some good ice cream in the city centre.

**Balzers:** A cute little town with a lot of castles and churches in the south of Liechtenstein. Like most towns in Liechtenstein, there is not that much to do, but if you need a break from studying, this place should calm you down a bit



Check out this activity

### The Length of Liechtenstein (Nendeln FL - Balzers FL)



↔ 32.3 km ↗ 270 m

**Davos / Klosters:** The home of WEF and some of the most popular ski resorts. Did you know that Parsenn / Gotschna is the favourite holiday destination of the British Royal Family, with the gondolas being even named after the King? Definitely a must-see (completely unbiased), be it for skiing, hiking, climbing, geocaching, etc, with beautiful landscapes, and an awesome lake. If you need a snack, Kaffee Klatsch is the place to go.



**Zermatt:** Probably the most well-known town of Switzerland, apart from places such as Luzern or Interlaken. A tourist hotspot with the most expensive prices anywhere in Switzerland, known for the Matterhorn, of course, and for its ski resort, where you can ski into Italy and back. There are also some awesome hiking routes, such as the Five Lake Walk or the Matterhorn Glacier Trail.

**Hospental:** A small mountain only reachable via Andermatt and a request stop at that. There is not a lot to do, however, there is a cool castle on the outskirts of town. After you visit the castle, you might even feel a bit jet-lagged ;)

**Lausanne:** The only city of Switzerland with a metro and the home of our fellow EPFLers. As mentioned before, a hot spot to go on a ferry

to France. You can also just enjoy your time at Lake Geneva, go visit the Olympic Museum, or go eat at Five Guys, something unknown to the German-speaking part of Switzerland (minus Landquart).

**Rigi:** Since 2009, the touristic Rigi Bahnen AG included the cog-railways from Arth-Goldau and Vitznau and multiple cable cars in the GA. The peak at 1797 metres is easily accessible all year around from the *Rigi, Kulm* train station and offers panoramic views on the entirety of Northern Switzerland. The area also features several ski slopes, many hiking paths and a spa at the station *Rigi, Kaltbad*.

**Walensee:** It has a lot of different hikes in the surrounding area that are absolutely stunning. Personal recommendation would be the Kerenzerberg Römerweg, which has a magnificent view of the Walensee. There are also a lot of different swimming opportunities, which are less crowded than for example Chinawiese / Tiefenbrunnen or Rentenwiese. Do note that the ships are not included in the GA.



That is quite a long list, huh? If you decide to go to some of these places, feel free to share your pictures with us, and if you feel very motivated, maybe even write an article about your adventure(s) ;)

# Review of Swiss lakes

BENJAMIN GRUZMAN – IS OUTSIDE OFTEN DESPITE STUDYING CS

In summer, nothing is better than visiting the extremely diverse lakes of Switzerland for bathing, tanning, hiking or taking a boat. The flatter parts of the Mittelland and the Romandie are characterized by their large, usually significantly longer than wide glacier lakes which feature official bathing spots, passenger boats and lake-side cultural events. Meanwhile, the Alps can boast of many beautiful smaller lakes hidden between mountain peaks and in the many valleys, some of which accessible by train, tourist funicular or only by hour-long hikes.

In the following, I will describe my four favourite lakes and the four bodies of water I'm most hostile to. This rating is extremely biased and subjective, and as such your opinion may deviate from mine. (in which case you're just wrong).

Points from 0 to 5 will be distributed for following categories:

**Bathing Quality:** How nice it is to bathe, primarily in summer but also in winter

**Untouchedness:** How well the natural integrity of the lake is protected which includes having nice untouched spots, not being too urbanized and the water quality

**Freedom from noise:** How noisy the surrounding areas are. Motorway/car noise pollution has a significantly higher impact than rail/boat noise

**Freedom of people:** On average, how few people bother you at the lake. Of course this strongly depends on weather, season, and day of the week.

**Panorama:** How pleasant the surrounding areas are to look at. Bonus points for impressive mountain ranges, delightful regional hikes and observation points.

**Reachability:** How easy nice spots are reachable by public transportation and a short easy walk. Bonus points for services such as restaurants, public toilets and lockers.

*My favourites:*

## 4. Lac de Joux: 5/4/5/4/3/4

This extremely long, thin lake is unique compared to the other lakes of flatter Switzerland. At 1000 meters above sea level in the most rural part of the canton of Vaud, this lake features a very beautiful coast with many secret spots, an underused rail line with seat guarantee and in winter, one can even ice-skate! The tourist boat unfortunately is not in the GA :(



<https://www.myvalleedejoux.ch/fr/Z14971/lacs-geles>

## 3. Murgerseen: 5/4/5/3/5/0

High up in the Glarner Alpen on the cantonal border to St. Gallen at 1800 m.a.s.l, these smaller lakes are fully worth the hike from Murg SG or Elm GL. The entire region is a beautiful natural protection zone with very diverse landscapes,

and the lakes themselves are extremely nice to bathe in (in sight of snow patches even in summer!). The immediate area is also used as a cow pasture, adding to the nature vibe. I can only recommend the "Murg-See Rundgang" with a bathing break in summer! There is also a taxi going half-way to the lakes from Murg, however this is a paid service.



## 2. Daubensee: 4/5/5/4/5/1

Even higher up at 2200 m.a.s.l on the pass between Kandersteg BE and Leukerbad VS, this large body of water is great to visit both in summer and in winter. Located on a plateau, the rocky ridges surrounding the lake are permanently covered in snow, while the lake itself can easily reach 18 to 20°C. Once the Gemmipass shepherd's path is opened, the hike from Leukerbad to Kandersteg or Adelboden with a bath break is more than recommended. In winter, one can take the cable car up from either side and snow hike to the other, as the lake is frozen solid. Amazing winter vibes included!



## 1. Lago di Lugano: 5/4/4/3/4/5

From all the lakes in Switzerland, my personal favourite is most definitely this beautiful Ticinese landmark. Forming a shopping cart shape around Southern Ticino, I have gone to my secret spot (not gonna say where!) to relax, study and swim often enough to fully justify my GA. Unlike other lakes with cities, this one is special in that, except for the southeastern part, the beauty, and tranquillity isn't annihilated by an asphalt-pollution-desert huge motorway. Especially the western part is bordered by tiny villages with no notable transit infrastructure or industry, maintaining its nature and innate relaxing vibes.

In summer, the up to 27°C warm water attracts many Swiss-German pensioners and families, but quiet corners still exist. Even in December, outside temperatures can reach summerly 20°C, making it ideal for relaxed winter swimming. Insider's tip: Every year for one weekend of May, the vineyards around the lake open their cellars for free tastings, mixing beautiful nature with great wine.

*Honorable mentions:*

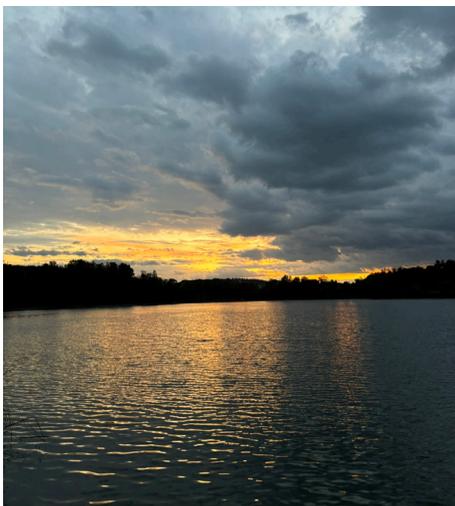
## \* Zürisee: 3/0/2/0/1/5

Zurich's home lake, it has suffered strongly under extreme urbanization, privatization and naval exploitation. The lakeside is either part of some rich family's garden and access is strictly forbidden, or the cantonal road passes by and

blocks the beach completely, cuts it off from the rest of the villages or drowns it in noise, while most official entry points are covered in concrete and people blasting shitty music. It has some extremely nice spots such as the Rapperswil wooden bridge, but even these have to deal with the incessant drive towards floor sealing (Or in German the absolute blast of a word “Bodenversiegelung”) and motorization. But it has boats in the GA :)

**\* Katzensee: 4/4/5/1/2/4**

No lake is as important to VIS as this natural protection zone barely still within Zurich city limits. Every year, Viskas brings together our association for grill & chill here, always in the rain but every time fun. In summer, the lake heats up to swimming hall temperatures so it is suited even for those used to beach vacations in tropical destinations, while for the average person it already becomes swimmable in April during good weather. Good surrounding infrastructure (Kiosk, toilets, grilling spots) make this a very popular spot for families.



**\* Ftan Bogn: 4/5/5/4/5/2**

This tiny puddle in the lower Engadin region of the canton of Grisons is one of my favourite study spots in Switzerland.

Although door-to-water is a four-hour trip for me, I come here both in summer when the sun blesses this southwards slope with heat and in winter when the beautiful Alpine panorama lets me think of something else than my studies (perhaps counterproductive if I go to study?). Very conveniently, there is a very recently built roofed resting spot with a large table and a toilet next to the lake, allowing you to work with paper and computer in the majestic snow landscape.



<https://www.engadin.com/en/lai-da-padnal-badesee>

**My greatest wet enemies:**

**-4. Walensee: 3/2/0/3/5/4**

This one will be a controversial one, but hear me out. Most people like the Walensee due to its extremely beautiful panorama when traveling from Zurich to Chur, but few actually stay at the lake itself. Due to the extreme ridges on both sides, there is a very special microclimate there which on one hand allows the growing of Mediterranean produce in Quinten, on the other hand makes sure that the lake is both cold and very rough throughout the year.

My main critic point however is most definitely the f\*\*\*\*\* motorway which runs along the entire southern bank. On the northern side, no

matter if you're right at the lake or hiking on the ridgeline 1500 height meters above, it is as if you're walking right in between two car lanes. The south side is oddly enough shielded from this horrid noise pollution, but there urbanization has taken its toll. In conclusion, nice to look at, not nice to be at. Similar to the Lac de Joux, the boat is not within the GA :(



**-3. Bodensee: 4/0/2/0/2/5**

The second largest lake of Switzerland, it suffers from the same fate as Lake Zurich. Flooded by generational wealth, the entire coast has been built shut. The German side is nicer, however suffers from being in Germany, like, eww. Konstanz is still within the GA and is worth a day trip with its lake promenade, shopping options and restaurants, but Lindau gets full hate as the ship to the island used to be in the GA but this year they decided to just quit it like true evil regressionists.

**-2. Aroseseen: 3/0/2/1/2/5**

The trend of hating on urbanization continues on these too. The higher one right next to the rail station is not considered a swimming lake, and thus when I entered anyway, people were staring at me weirdly and making weird remarks (but it isn't illegal!). The lower one on the other hand actually costs to enter during the usual season!!!! Arosa is a tourist hotspot and wants to limit the destructive forces of mass tourism, sure, but I highly doubt anyone comes there

specifically to swim in a shitty ass puddle with limited mountain scenery in the middle of a bustling centre of capitalism and concrete.

**-1. Seenalperseeli: 0/4/5/2/2/0**

This one is a very, very specific enemy of mine. On the alternative path on the Suvorow hiking path from Muothatal SZ to Uri, this small lake has subverted my expectations more than any lecture has. The alpine hike itself is rather boring with little changing scenery and too much concrete, but this puddle of crap destroyed all my hopes of enjoying the day trip there. Filled to the brim with algae caused by the intensively fertilized pasture surrounding it, entry is prohibited by a disgusting layer 20 cm thick of slippery biomass. It is a popular spot for nudist fishermen (that exists???) so sunbathing here isn't very enjoyable either. All in all, I'd recommend to just completely avoid this entire area.



**I forgot to take a picture when I was there because I was too upset about not being able to swim there. This picture makes it look too nice, don't be deceived. This lake is evil.**

([https://www.hikr.org/gallery/photo1592230.html?piz\\_id=31154](https://www.hikr.org/gallery/photo1592230.html?piz_id=31154))

# Japanese vs. Swiss Railways

HOSSWALD — WANTS TO BRAG ABOUT HAVING BEEN ON A SHINKANSEN MULTIPLE TIMES

You might be wondering: does it even make sense to compare Japanese and Swiss railways? Japan has 123 million people; Switzerland has just 9 million. Fair question - I don't care.

This is more about which railway system I, a regular person who just really likes trains, enjoy more. And if you disagree with my opinions (or spot a factual mistake), feel free to write your own thoughts in an article for the next Visionen (:). Just email it to visionen@vis.ethz.ch

## Quick Facts

Before we get subjective, here is some context to make sure we're on the same track (pun intended).

In Switzerland, when we say railway we usually mean SBB (Swiss Federal Railways). In Japan, things are more fragmented. After the breakup of the Japanese National Railways, the country ended up with seven JR companies (like JR East, which covers Tokyo and the northeast), plus countless regional lines.

While SBB focuses mostly on passenger transport, JR companies often have a very diverse portfolio. For example, JR West makes around 20% of its revenue from non-rail ventures like supermarkets and hotels.

Now, some numbers:

	Switzerland	Japan
<b>System Length</b>	5,323 km	30,625 km
<b>Electrification</b>	Nearly all	About two-thirds
<b>Busiest Station</b>	Zürich HB (36th globally, ~155 million passengers/year)	Shinjuku Station in Tokyo (1st globally, ~1.16 billion passengers/year)

In general Japan dominates the global ranking: 64 of the 85 busiest stations in the world are in Japan.

Both are famous for their punctuality and reliability (I couldn't find good numbers for JR trains outside of the Shinkansen lines, but SBBs overall punctuality was at 93.2% in 2024).

But what really matters is the experience of riding the trains:

## Aesthetics

SBB's branding is classic: clean lines, red-blue-white color scheme, and that iconic minimalist station clock. It's tasteful — and kind of boring.



In contrast, Japan is way more colourful. Each JR company has a main colour (green for JR East, blue for JR West, etc.), but then all the train lines usually have their own accent colour that makes it recognizable. You also see special trains more often, either very luxurious-looking ones with hexagonal windows or themed ones like the Pokemon train or the Disney wrapped Shinkansen. It's super cool because you have the chance of seeing a special train wherever you go.



Author only saw this one from the outside :(

Even the station noise has more variety. The Swiss jingle spells out 'SBB - CFF - FFS' (Es-B-B, C-F-F, F-F-Es) musically, which is neat. But Japan takes jingles to the next level: different tunes for different stations and lines. It can be overwhelming, sure — but I really like it.

**Winner: JR**, for being more fun.

## Accessibility

Switzerland's Taktfahrplan system (regular, repeating schedules that guarantee good connections) is great. You quickly memorize which platform to go to for your usual routes. But if you need to switch it up - for example,

use a different platform or go to a different exit - Zürich HB (as the only big station in Switzerland) gets super confusing super quickly.

Now, Japan: stations like Shinjuku and Shibuya are objectively huge and chaotic, yet somehow easier to navigate for me. There are signs **everywhere** and for everything, in multiple languages, showing you exactly where to go — even telling you when to turn around. Above the train doors, diagrams show where you'll be on the platform when you leave, which car you're in, and where the exits are.

Also, almost every station in Japan has clean, free public toilets, which is definitely a plus.

In terms of apps, the SBB app is fantastic: intuitive, informative, and lets you do everything from buying tickets to bookmark routes.

In Japan, buying tickets for local trains online is basically not a thing. There are apps for planning routes, but they're annoying to use (at least the ones I have tried), so most people just use Google.

**Winner: SBB**, because I love the SBB app and don't love Google and after some time you get used to Zürich HB.

## Comfort

How nice is it to sit on the train?

Both countries have clean, quiet trains. The Shinkansen offers tons of legroom - around what you would maybe find in first class in Europe. It is really nice to stretch the legs and makes it easier to get out of and into your seat. You can also rotate all seats to face the direction of tra-

vel (usually done by station staff at the first/last stop), which is great if (like me) you get motion sickness riding backwards. Plus, the speed of course.



Local Japanese trains tend to have inward-facing bench seats, which are great for short, crowded rides. It's easier to get on and off, and the layout fits more people.

But for longer trips, the side-bench style kind of sucks. You don't get a great window view because people are sitting in front of the trains so it would kinda feel like staring at them, and there's something weirdly sleep-inducing about them.

Swiss trains typically use a 2-2 forward-facing layout, and it feels more private. I don't have to

see that many people at once, which is a plus. They're also less crowded on average, which is definitely part of the appeal.

**Winner: Tie (tending towards SBB trains).** Shinkansen legroom is elite, but on average I prefer Swiss seating.

### Final Thoughts

So who wins? That depends on what you value more I guess. I really enjoy riding trains in Japan and I feel way more comfortable in crowded situations there than I do in Switzerland. But Swiss trains are definitely more chill and I cannot wait for my ETH studies to pay off and get me a good paying job so I can finance myself a GA.



***It is very cool that trains are a part of popular culture in Japan***

# Prepare for upcoming Heat

WANGLEI SHEN (WASHEN) - "I LIKE HEAT BUT NOT THAT HEAT(°C)"

**The heat of a new season is upon us—literally and figuratively. With temperatures rising and activities heating up, it's time to gear up for both the warm weather and the hot trends coming your way. Whether it's managing your comfort in sweltering conditions or staying ahead in the buzz of fashion and technology, preparation is key. No need to sweat — let's dive into the essential steps to keep your cool and stay chill!**



*My laptop after becoming a heli.*

"Ah, summer. The season of beach trips, ice-cold drinks... and your unfinished IML or RSE project glaring at you from the screen. Just when you thought you'd escape into vacation mode, reality hits—your computer's fans kick into overdrive, roaring like a jet engine as it battles both your spaghetti code and the sweltering July heat. Yet here you are: squinting at debug logs, wiping sweat off your trackpad, and wondering if thermal throttling applies to human brains too. Because whether it's your CPU fighting for its life or your willpower melting into a puddle of iced-coffee rings on the desk, one universal truth remains — **heat is the enemy, in every form.**"

ZeroTierOne (Repo: [zerotier/ZeroTierOne](#) 15.4k★)

Still having problems visiting your server outside of the local network? Or trying to play games with friends but stuck behind NAT and port forwarding? ZeroTier will be the easiest solution ever!

ZeroTier is an open-source, cross-platform SDN (Software-Defined Networking) solution that creates secure, distributed virtual networks with zero configuration. By leveraging advanced P2P technology, it makes remote connectivity as simple as joining a local network. And it also works

seamlessly across Windows, macOS, Linux, Android, iOS and even embedded systems.

To use it, all you have to do is download the app from the website, create your own virtual network and add other devices into the network. Wherever you are, all the devices will be accessible with the pre-assigned virtual IP address.

### FanControl (Repo: Rem0o/FanControl 16.1k★)

Tired of loud system fans, unexpected overheating, or limited BIOS options for temperature control? FanControl offers us a smart and user-friendly solution to manage your PC's cooling.

Designed for Windows, FanControl is an advanced tool that lets you monitor and adjust fan speeds based on real-time temperature readings from various components sensors. This software will alas all sensor data with a simple calibration. With its highly customizable interface, you can create detailed cooling profiles tailored to your performance and acoustic preferences—whether you're gaming, working, or just browsing.

next vacation spot, but your to-do list refuses to cooperate.

Enter Genact, the nonsense activity generator. With a few keystrokes, your terminal transforms into a theater of fake productivity: frantic coding, mysterious downloads, encryption sequences, and other absurd simulations—all while doing



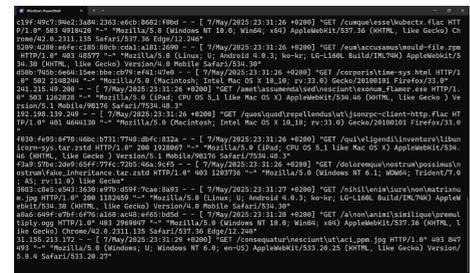
### genact (Repo: svenstaro/genact 10.4k★)

The office is warm, the sun is blazing outside, and your motivation is melting faster than a Glace. This is the classic summer feeling, when your brain is already onboarding for the nextfor

absolutely nothing. It's the perfect way to look busy while secretly taking a mental break, letting the soothing hum of imaginary processes distract you from the heat.

So lean back, take a sip in your iced coffee, and let Genact “do” the work for you. Do some daydreams and get ready for the vacation you deserve.

Designed for Windows, FanControl is an advanced tool that lets you monitor and adjust fan speeds based on real-time temperature readings from various components sensors. This software will alas all sensor data with a simple calibration. With its highly customizable interface, you can create detailed cooling profiles tailored to your performance and acoustic preferences—whether you're gaming, working, or just browsing.



### python-tariff (Repo: hxu296/tariff ★)

As a professional programmer, I am pretty sure that you have already tired of all sneaky C++ based Python packages such as numpy, pandas and tensorflow etc. that just to make Python look fast? Do you already feel enough with statements like “Python run really fast.”? NOW WE'RE FIGHTING BACK!

tariff is a tremendous (satirical) Python library that aggressively punishes these libraries with artificial delays, mimicking the art of the deal (Greatest US president's style). Every time you import a "foreign" package (read: any package not written in pure, patriotic Python™), tariff slaps it with a "tax", forcing it to wait longer to load.

Nevertheless, what are the other reasons for this tremendous (satirical) library:

1. Bosses who think your code isn't patriotic enough.
2. Anyone who's ever yelled, "BUILD THE WALL... around pip install !"
3. We don't need these foreign modules to have any influence on our great Python codebase

### Make C++ Great Again



# Skandal im Sperrbezirk: A Hot Take on Rosi, Rules, and Refreshments

PASCAL STREBEL - ELSA CAN LET IT GO, I CAN'T REALLY

Ah, summer. That magical time of year when CS students emerge, blinking and disoriented, from their dimly lit caves. Not because they want to, but because the lack of air conditioning forces them to surrender their natural habitats to the oppressive heat. Suddenly, you're squinting at the sun, desperately trying to preserve your hard-earned, royally pale complexion. But summer isn't just about heatwaves and sweaty keyboards — it's also about heat of another kind. The kind that inspired one of Germany's spiciest 80s hits: "Skandal im Sperrbezirk" by Spider Murphy Gang (yes, I know, a bit of a random transition, but stay with me).

For the uninitiated, this Bavarian rock anthem tells the tale of Rosi, a fiercely independent entrepreneur operating within Munich's Sperrbezirk — a restricted zone where certain... services are banned. Naturally, the authorities are less than thrilled. But Rosi? She's thriving.

Now, you might be wondering: What does a song about Munich's red-light district have to

do with me, a chronically sleep-deprived ETH student? Well, let's reframe the Sperrbezirk as ETH's network infrastructure. It's designed with rules, boundaries, and restrictions. But there's always someone (\*cough\* Rosi \*cough\*) who finds a way to bypass the system, causing chaos and admiration in equal measure. Sound familiar? Rosi was basically the OG sysadmin rebel, hacking the system long before it was cool.

But let's get back to the heat. The sweltering Munich summer that framed Rosi's scandal mirrors the kind of pressure we all feel — whether it's from looming deadlines or the existential dread of debugging an infinite loop. And just like Rosi, we can learn to thrive in the chaos. Here's how:

## 1. Rules Are Just Guidelines (Mostly)

The Sperrbezirk was meant to enforce order, but Rosi made it her playground. Similarly, as computer scientists, we know that the best innovations often come from bending the rules. Just remember: There's a fine line between clever creativity and disciplinary hearings.

## 2. Embrace the Heat

Whether it's the literal summer heat or the metaphorical heat of a project deadline, sometimes you just have to lean into it. Crank up the Spider Murphy Gang, dance around your room, and remind yourself that even Rosi thrived under pressure. If she can handle the authorities, you can handle your final project.

## 3. Beer is Always the Answer

Let's not overlook the most important lesson here: Beer makes everything better. No matter whatever nasty task you are doing, a cold beer is the ultimate reset button. (Or, if beer's not your thing, insert your beverage of choice here. No judgment. Really.)

If Rosi were around today, she'd probably be running a wildly successful OnlyFans or selling her phone number as an NFT (with a cheeky "call me maybe" caption). The Sperrbezirk would be less about physical boundaries and more about firewalls, VPNs, and GDPR compliance. But one thing's for sure: She'd still be thriving, beer in



hand, while the rest of us scrambles to keep up.

So, as the summer heat bears down, take a page from Rosi's playbook. Just make sure your phone number doesn't end up in a song. And if it does? Well, at least you'll be famous. Prost!

# Solution to Connections

**$O(N \log N)$**

FFT, HEAP SORT, KRUSKAL ( $E = N$ ), MERGE SORT

**$O(N)$**

LINEAR SEARCH, MAX ELEMENT, SINGLE PASS ARRAY, TWO-POINTER SCAN

**$O(N^2)$**

BUBBLE SORT, EDIT DISTANCE, INSERTION SORT, NESTED LOOPS

**$O(\log N)$**

BINARY HEAP INSERTION, BINARY SEARCH, BST LOOKUP, EXPONENTIATION BY SQUARING

## Two Sum

Given an input array  $a$  and a target number  $t$ , find two indices  $i, j$  such that the elements are equal to each other ( $a_i = a_j$ ). It is guaranteed that there exists exactly one such pair.

### Example

#### Input 1

$a = [2, 7, 11, 15], t = 9$

#### Output 1

[0, 1]

#### Input 2

$a = [3, 2, 4], t = 6$

#### Output 2

[1, 2]

### Constraints

Length  $\leq 10^5$

$-10^9 \leq a(i) \leq 10^9$

$-10^9 \leq t \leq 10^9$



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