

**Zeitschrift:** Visionen : Magazin des Vereins der Informatik Studierenden an der ETH Zürich  
**Herausgeber:** Verein der Informatik Studierenden an der ETH Zürich  
**Band:** - (2022)  
**Heft:** 6

## Heft

### Nutzungsbedingungen

Die ETH-Bibliothek ist die Anbieterin der digitalisierten Zeitschriften auf E-Periodica. Sie besitzt keine Urheberrechte an den Zeitschriften und ist nicht verantwortlich für deren Inhalte. Die Rechte liegen in der Regel bei den Herausgebern beziehungsweise den externen Rechteinhabern. Das Veröffentlichen von Bildern in Print- und Online-Publikationen sowie auf Social Media-Kanälen oder Webseiten ist nur mit vorheriger Genehmigung der Rechteinhaber erlaubt. [Mehr erfahren](#)

### Conditions d'utilisation

L'ETH Library est le fournisseur des revues numérisées. Elle ne détient aucun droit d'auteur sur les revues et n'est pas responsable de leur contenu. En règle générale, les droits sont détenus par les éditeurs ou les détenteurs de droits externes. La reproduction d'images dans des publications imprimées ou en ligne ainsi que sur des canaux de médias sociaux ou des sites web n'est autorisée qu'avec l'accord préalable des détenteurs des droits. [En savoir plus](#)

### Terms of use

The ETH Library is the provider of the digitised journals. It does not own any copyrights to the journals and is not responsible for their content. The rights usually lie with the publishers or the external rights holders. Publishing images in print and online publications, as well as on social media channels or websites, is only permitted with the prior consent of the rights holders. [Find out more](#)

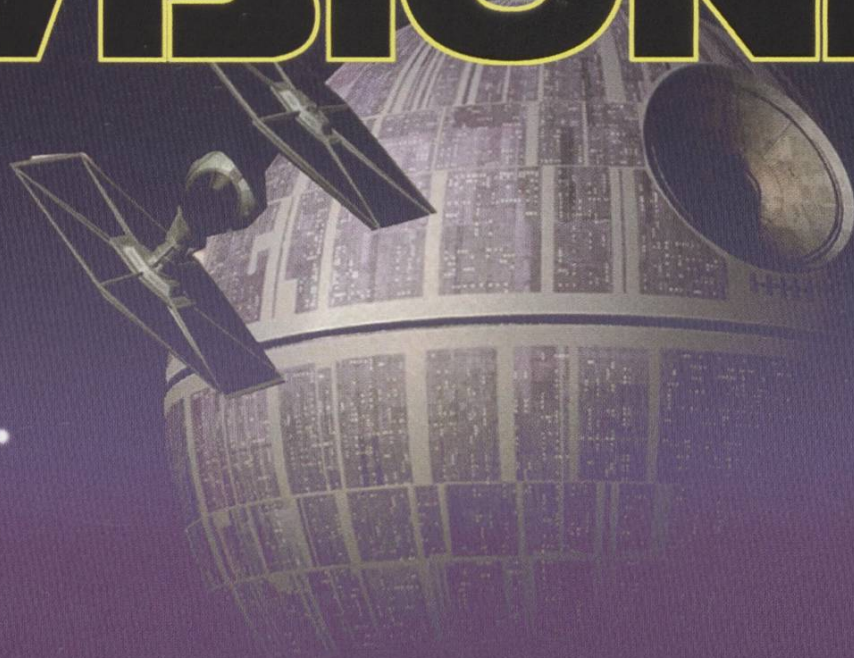
**Download PDF:** 04.07.2025

**ETH-Bibliothek Zürich, E-Periodica, <https://www.e-periodica.ch>**



Ausgabe 06/2022

# VISIONEN



## BJÖRN WARS - THE JEDI WAY



[visionen.vis.ethz.ch](http://visionen.vis.ethz.ch)

Dezember 2022

Magazin des Vereins der Informatikstudierenden an der ETH Zürich (VIS)



# EDITORIAL

It is a period of knowledge acquisition. Students, studying in hidden bases, have gathered their first bonus points on their way through the semester. In their free time, VIS actives managed to collect old versions for the ultimate challenge, the BASISPRÜFUNG, an exam block difficult enough to force many career plan changes. Beloved by aspiring students, VIS mascot Björn waits in the oVIS on his comfy sofa, custodian of the exam collection that can save his people and restore free time after the exam session...

After these words, I am sure you are in the right mood to read on. As it is the last issue of the year, I hope we can help you on your way to successful exams. In case you find yourself stuck, get inspired from Star Wars: even in the most desperate times, rebels find some hope and carry on.

May the force be with you!

Tobias Scheithauer

# CONTENT

## OFFICIAL

Präsikolumne: The rise of Zibung	6
Hopo-Kolumne: A new Hopo	8
Semester Feedback: Attack of the Younglings	10
CSNOW: Return of CSNOW	14

## BJÖRN WARS - THE JEDI WAY

A view inside DisneyResearch Studios	16
Starry Nights and Deathstars: on generative AI	18
Was dich Nachts wach hält	22
What is your favorite Star Wars scene?	24
The Last Algorithm	25
The Jedi Codex of ETH	30

## BJÖRN WARS - THE DARK SIDE ON THE BACKSIDE OF THIS ISSUE





# Transform data into breakthrough insights – Transform the Everyday

At Siemens, we are always challenging ourselves to build a better future and impact society. We need the most innovative and diverse digital minds to develop tomorrow's reality.

We are looking for ambitious people all across the world:

- making things talk with IoT: develop, deploy and run digital services, create your applications, or even new business models
- making cities, buildings, and offices smarter
- enhancing travel efficiency and comfort through digitalization
- breaking world records with software and system engineering

[siemens.ch/employer](https://www.siemens.ch/employer)

# SIEMENS



# PRÄSIKOLUMNE

## THE RISE OF ZIBUNG

SENATOR JASON ZIBUNG - DRANK A SHOT WITH MICHAEL HENGARTNER <sup>(1)</sup>

Dear readers,

As far as the light side of the Force is concerned, attending the ETH day and talking with various professors sprouted many ideas on how teaching and general lectures could be improved at ETH. It was also heartwarming to see how much, for example, the CS award means to the professors. The people I spoke to are all eager to keep improving and pass their knowledge on to new professors. Likely, the reader of this article does not know of the existence of "Refresh Teaching" ([refresh-teaching.ethz.ch](http://refresh-teaching.ethz.ch)). Besides many topic-related posts (text and video), they also invite professors with more experience to share their tricks with their peers to improve the general quality of education at ETH.

Moreover, the department evaluation is over, and I generally have the impression that it went well. It seems that there is a large overlap between what we think of issues and what the department thinks. It's not good that there **are** issues, but I'm glad that there is no critical discrepancy.

I also attended the talk with our rector, where we discussed topics such as missing infrastructure, financial compensation for BSc and MSc theses, the ETH IT rework and big exam blocks. Of course, there were various other things, but it wouldn't be fun if no one had to read our protocols.

**"ETH DAY ALSO STARTED WITH COFFEE AND TEA  
AND ENDED WITH MEAD AND BERLINER LUFT."**

Lately, though, I've been feeling more and more drawn to the dark side of the Force. The reason? Alcohol. A recurring theme in studies in general and in my current board even more so. Have you ever wondered at what point it counts as an addiction? I didn't until I saw that people around me were drinking more and more. The only events where you don't already get tempted while they are ongoing are the political gatherings, but even there you have to drink afterwards. Sadly (or luckily for my health), I wasn't able to attend the VSETH-Vorstandspizzaplausch<sup>[2]</sup> and the board mead tasting due to a sudden emergency doctor visit. However, I made up for it by drinking various meads the next morning I went into the oVIS.



ETH day also started with coffee and tea and ended with mead and Berliner Luft<sup>[3]</sup>. So I'm getting my share.

But anyway, stay healthy, study well and stay away from alcohol while you still can.

Best, Jason



[1] Google him

[2] Vorstände of all student associations eating Pizza and having Plausch

[3] While this might be a bit more critical, I wanted to note that I don't get the hype around "Luft"... it's way too sweet, super sticky if you miss your glass and there are many better options out there.



**A LONG TIME AGO, IN A  
MEETING ROOM FAR FAR  
AWAY...**

## **A NEW HOPO**

**SENATOR JULIA BOGDAN  
ACTUALLY ENJOYS THOSE MEETINGS**

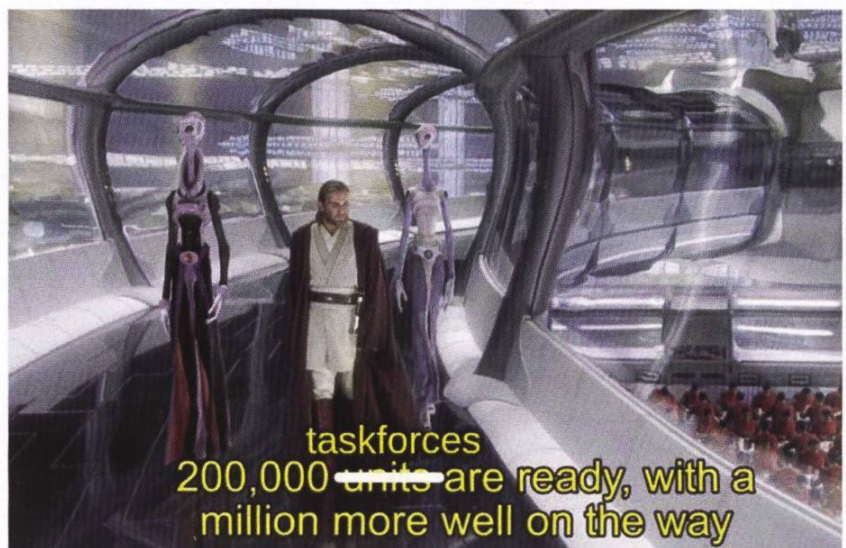
It is a period of great chaos. The semester is coming to an end and while the students are slowly preparing for the coming war on exams, the HoPo has been preparing to strike from their hidden base in CAB D78<sup>[1]</sup>.

To increase the probability of success, they have split into different squadrons. The newly formed diversity squadron has been working tirelessly on making the department more inclusive. You can request their support by sending an email to [diversity@vis.ethz.ch](mailto:diversity@vis.ethz.ch).

The trusty UK has also had successful missions since the last issue. They met to discuss the exam evaluation from last summer and have devised some strategies to help improve the exams even further. Together with the rest of the HoPo rebels, they are currently working on bringing focus groups to more subjects than just EProg and A&D.

There are many more missions being planned, they are however not ready to be shared just yet. But fret not, the HoPo will be back soon.

[1] Said room far far away.







# Make quantum leaps

Sensirion is fast, agile and unconventional. We cross boundaries, grant a lot of freedom and show genuine appreciation. As a market leader with around 800 employees, Sensirion offers stability and security while still acting with the startup spirit of its earliest days. Expand your horizons and increase your market value – throughout Switzerland and around the globe. Make a difference and create sustainable change for a smarter future.

**Become part of the story – where market leadership meets startup spirit**

[www.sensirion.com/career](http://www.sensirion.com/career)

**SENSIRION**



# SEMESTER FEEDBACK

## ATTACK OF THE YOUNGLINGS

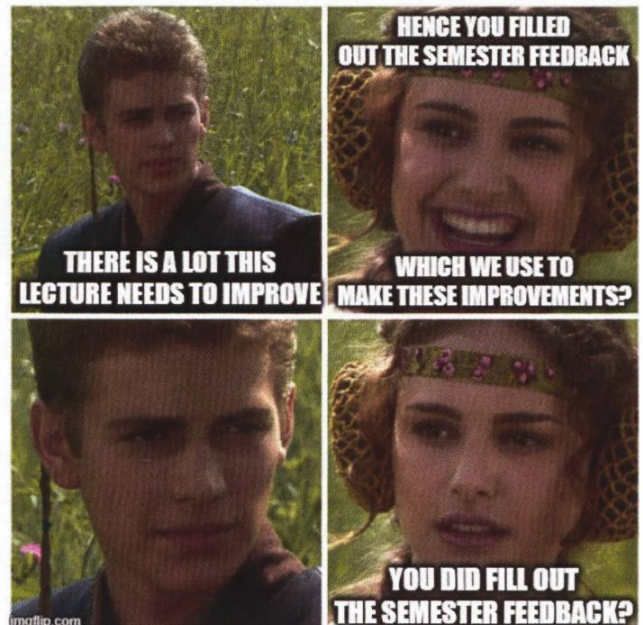
**IN SHORT: WE ARE YOUR SEMESTER SPOKESPEOPLE, AND OUR MISSION IS TO EASE COMMUNICATION BETWEEN PROFESSORS AND STUDENTS. WE KNOW HOW YOU FEEL, AS MOST OF US ARE LITTLE INTROVERTED MUSHROOMS IN A BIG, BIG POT OF MUSHROOM SOUP. THUS, WE TRY TO MAKE YOUR LIFE EASIER AND TO ACCOMPLISH THIS WE USE OUR MOST TRUSTED TOOLS.**

**SEMESTERSPEAKER**

**PART OF THE COUNCIL, BUT NO RANK OF A MASTER**

### Lecture-specific feedback

If you have any thoughts or concerns regarding the contents, style, pace, professors, exercises, etc. of a lecture, you can write us an email at [sprecher1jahr@vis.ethz.ch](mailto:sprecher1jahr@vis.ethz.ch) or [sprecher2jahr@vis.ethz.ch](mailto:sprecher2jahr@vis.ethz.ch). The speakers responsible for the lecture in question will then relay your comments to the professor, of course always preserving your anonymity and using the most badass brute force methods (mainly giving away uwu-Björn stickers to the professor).





## Feedback Surveys

And we conduct feedback surveys, where you can state your concerns regarding the lectures. We have gathered the feedback for each of the following lectures and will now even present the breathtaking results of HS22:

**Algorithmen und Datenstrukturen** (A&D) has passed the semester feedback with above-average satisfaction. One of the most notable problems concerns the glorious platform “CodeExpert” and its exercises – as it always does. Professor Markus Püschel suggested a coding boot camp as well as publishing exercise solutions from previous years. The script for the theory is also not properly adjusted to the first semester’s curriculum, since it still contains content from a time when the course used to be taught in later semesters. Students are very much encouraged to look at old solutions and codes to gain a better understanding of the exercises.

Now onto a fan favorite: **Diskrete Mathematik** (DM). This semester’s feedback was predominantly positive. Most students considered the framework of the course to be quite clear and well-constructed, all the while finding the course and its exercises challenging. According to the feedback, DM is the most time-consuming subject, but other than that, this year’s first-semester block seems to like it!

Next, we have our fun little Java tutorial: **Einführung in die Programmierung** (EProg). The feedback was mostly positive, however, there were a few issues. One issue was the huge amount of redundant presentation slides, which Prof. Gross tries to eliminate from now on. Another one was the lack of explanation of Java foundation and general concepts of programming, mostly for students in the focus groups. Prof. Gross hereby refers to other course books listed on the course website, to which he will add the ETH eTutorial for Java.

Last, but certainly not least, we have **Lineare Algebra** (LinAlg). This course – as the others – got mostly positive feedback. Roughly a third of the students, however, struggles with the exercises, probably due to the newly introduced proofs on the exercise sheets. These exercises are sort of a “necessary evil” meant to be challenging in order to better prepare the students for the exam, where this type of question is to be expected. The pace is criticized by about half of the students. Keep in mind that LinAlg isn’t meant to be an easy subject, but it is an essential one that will reoccur over and over in later semesters. To make future students’ lives easier, the lecture script will be updated and reworked in future iterations of the course. As a side note on the lecture’s language: as much as everyone would like it, the professors are not allowed to switch to English due to legal issues.

We have found ourselves in the territory of the cool 3rd-semester kids, and we start off with some more math: **Analysis II**. The majority of the students were quite content with the structure of the lecture, which is presumably why almost everyone chose to attend the lecture at its full length. Most people were able to follow the lecture's topics and enjoyed the professor's enthusiasm. However, there were mixed feelings about the readability of the presented notes, which has been addressed by Prof. Imamoglu. The provided materials (script, book, notes, etc.) were also quite useful to a large majority of students and almost everyone thought that the exercises go well together with the lecture! Overall, the lecture received an above-average grade with not much of a hassle.

Onto our favorite numbers class: **Numerical Methods for Computer Science** (NumCS). As a consequence of the low attendance in the NumCS Q&A sessions, we decided to only conduct the online feedback survey and no session with the microphone cube. The results were mostly positive, but unfortunately, only a few people participated, which might have skewed the scales. In general, most students were very happy with the flipped classroom format and satisfied with the general lecture quality, materials, exercises, and everything else.

A lot of people were happy with the C++ introduction, which will be a permanent part of the course from now on. There were a few complaints about the audio of the lecture videos and the brevity of some proofs in the lecture document. When asked about those topics, Prof. Hiptmair said he could add a few intermediate steps to the proofs if supplied with the corresponding indices. He also stated that he could artificially improve small parts of the audio, if he was provided with the timestamps of the horrendous sections. He will not record new videos in the near future, since a lot of work hours (500h lower bound) went into the current version. Furthermore, he is considering the idea of including short recaps of the necessary LinAlg concepts in the lecture document. Next year's lecture will be held by a colleague of Prof. Hiptmair. However, the format and lecture videos will remain the same.

**Systems Programming and Computer Architecture** (SPCA) once again remains the best 3rd-semester lecture - but - if we are to believe the opinionated fans - still not better than **Theoretische Informatik** (TI). The professors are super enthusiastic about the subject and are confident in explaining it. In contrast, the negative feedback we received was that the labs do not have to do much with the exam. Sometimes there are also too many questions during the lecture, which interrupts its flow. To end on a happy note, the increased number of students with M1 chips seem to have found a plausible solution and did not have a problem following the course.



The survey for TI turned out to be one of the best, how did you guess? The students were very happy with the book by Prof. Hromkovic, which covers all parts of the lecture and isn't overloaded. Another positive aspect is the exercises: They aid the students in understanding the subject and are great preparation for the different exams. To end on a sad note, the 8 am lecture left a GREAT number of people upset in their beds - a comment sent to us by an SPCA person (whose lectures start at 10 am).

Well done soldier, you made it to the end! If you have any comments or general problems you know where to find us.

If you'll excuse us:

`exit(Semestersprecherartikel.pdf).`





**SOMETIMES BEING A WOMAN IN CS CAN FEEL LIKE YOU ARE THE ONLY JEDI IN A SEA OF STORM TROOPERS. BUT DON'T WORRY, THERE ARE MORE JEDIS THAN YOU MIGHT SEE AT FIRST GLANCE AND MANY STORM TROOPERS ARE ON YOUR TEAM TOO! PLUS, DON'T FORGET ABOUT CSNOW AND VIS, YOUR HELPFUL DROIDS, ALWAYS HERE TO HAVE YOUR BACK. HERE ARE SOME TIPS COMING FROM HIGHER SEMESTER STUDENTS LOOKING BACK AT THEIR FIRST YEAR AT ETH AND WHAT THEY WISHED THEY HAD KNOWN BACK THEN.**

First and foremost, just like in the Star Wars movies, it is important to work together. Try to connect with other people in CS, especially other women, to share your experiences and help each other find your path through ETH.

Try not to compare yourself to your peers! You might feel you are not as good as them at something, but that comparison is just unfair to you. Those thoughts are hindering more than they are helping. You have earned your place at ETH just as much as everyone else. And most people around you will be glad to help you understand the problems you are facing. Don't be shy, asking never hurt anyone!

## RETURN OF THE CSNOW

CSNOW - WONDERING WHO FLIPPED OUR LOGO HALF WAY THROUGH CREATING IT



You may feel overwhelmed quite often in the beginning of your studies, but don't worry, everyone else is as well. This is a new and somewhat intimidating environment that takes a bit of time getting used to. Surround yourself with the right people and you will feel at home in no time. Don't forget that you are not the only one struggling. Even if you can't see it, a lot of the other students, including guys, feel the same way as you. So lend a helping hand, share a kind word and uplift each-other.

Don't worry about being productive all the time. Some days you just can't be as motivated as others. Just like our bodies, our heads also need rest days. Go out into nature, read a non-CS related book, or talk to your friends. Sometimes, your head just needs a little fresh air. Rest and recovery is also an essential part of being productive.

Take care of yourself and be kind to yourself. We often think stressing ourselves would help boost productivity, but sometimes it can just hinder you from focusing and increase your anxiety. It's important to take breaks. Some days can be not as good as others and that is totally normal. We can't always be prepared for the worst. Remember you are not alone, there are many things set up to make your experience easier. In case of an emergency, there are menstruation stations in bathrooms, all over ETH! Please note the main toilet providing you the help you need is in CAB right next to the oVIS!

In case you ever feel like you need some more support, check out the mentoring program we organised together with VIS!



Its goal is to provide Erstis and new Master students with a partner from a higher semester who can guide them through the overwhelming first semester at ETH. It is important to CSNOW to provide the opportunity for women to be paired as mentor-mentee if they prefer that, as they can experience their studies differently than men and might want more tailored advice. There is also a follow up event for the mentor-mentee pairs in the works, and it will have cake! But don't get too excited yet, as it will take place next semester. So keep an eye out for the email containing the necessary information, and see you there!

In case you want to talk to someone, you can try out "Nightline Zurich". Of course, for more serious issues, don't be afraid to ask for professional help. There is also a program from ETH and UZH, called "psychological counselling service", where you can always get an appointment to talk to a professional.

We hope these tips can help you feel better. CSNOW wishes you a nice holiday and best of luck for your exams. Keep your head up, you got this! :) ❤️

Your CSNOW team





# A VIEW INSIDE DISNEYRESEARCH | STUDIOS

NORBIT 🤖 - A LOT GOING ON IN THE HOUSE OF THE MOUSE

**EVERYONE KNOWS DISNEY FROM THEIR FAMOUS ANIMATED MOVIES, LIKE THE LION KING, ALADDIN, WALL-E, FROZEN, AND MANY MORE. TO CREATE THESE MOVIES, DISNEY HAS ALWAYS INNOVATED THE TECHNOLOGY OF ANIMATED FILM, AND IS STILL DOING IT TODAY. IN ONE OF THE MORE FAMOUS EXAMPLES, THE SNOW USED IN THE FROZEN MOVIE WAS CREATED BY DISNEYRESEARCH|STUDIOS HERE AT ETH IN ZÜRICH, AND THE SNOW WAS MODELED AFTER REAL SWISS SNOW. IN THIS ARTICLE, WE LOOK AT SOME OF THE RESEARCH AREAS OF DISNEYRESEARCH|STUDIOS.**

## Face Tracking

To advance the research area of face tracking, DisneyResearch|Studios have developed the Medusa Facial Capture system. The Medusa system is a tool that allows for the reconstruction of an actor's face in full motion without the use of motion-capture dots. Medusa creates high-resolution 3D faces that can track individual pores and wrinkles over time and recreate the dynamic appearance of blood flow and skin shine, providing a very realistic virtual face that can be used in visual effects and computer games. Medusa is useful for creating expression shape libraries and reconstructing performance dialog. You might think that this only has been used for research purposes so far, but you would be wrong. Medusa has been used for the newer Star Wars movies and series, many Marvel projects like Infinity War or Multiverse of Madness, and even the newest Terminator movie.<sup>(1)</sup>



Of course, this technology is constantly being improved too. For example, this year they have developed a new technique to accurately track facial expressions when facial hair is present. This allows for detailed 3D reconstruction and tracking of facial hair over time. The method can be used to create more faithful digital actors or to model clean-shaven digital doubles without requiring the actor to shave.<sup>(2)</sup>

### Augmented Reality

DisneyResearch|Studios also focus a lot on the area of Augmented Reality. In a paper from 2015, they explore various different ways for children to interact with AR objects that are based on real-world objects. For example, they have an application that turns a character drawn on paper into an animated AR character, with which the user can interact with. Another use case that they present is a music arrangement game. An existing song is composed of various musical elements. These elements are split into two categories: style and instrument. The user can choose instruments and styles independently and recreate the song as desired. To arrange the song, the user moves physical markers in the world. By placing the marker on a physical board, an augmented version of the instrument is displayed and the corresponding audio is played.<sup>(3)</sup>

### Neural Video Techniques

As famous actors keep aging, the use of de-aging techniques keeps getting more and more popular. Traditionally, a de-aged or re-aged 3D mesh of the actor's face needs to be created and carefully animated. However, DisneyResearch|Studios have developed a technique to accurately de- and re-age a subject. Crucially, their technique retains the actor's identity, so they don't look like a completely different person. Additionally, the faces also don't need to be aligned perfectly in the center of the screen, which makes processing the frames easier. To train their neural network, they used GANs to generate images of synthetic people. This was particularly useful because they could generate the same person but at different ages, so they could use this as part of their training data. In the end, they get a neural network that can de- or re-age a subject and keep the identity of the actor the same and keep temporal consistency between the individual frames.<sup>(4)</sup>

Of course, all of these projects are only a small fraction of the work that is happening at DisneyResearch|Studios. They also usually have availabilities for student projects like a BSc or MSc thesis, or a semester project.



[1] <https://studios.disneyresearch.com/medusa/>

[2] <https://studios.disneyresearch.com/app/uploads/2022/07/Facial-Hair-Tracking-for-High-Fidelity-Performance-Capture.pdf>

[3] <https://studios.disneyresearch.com/wp-content/uploads/2019/03/Augmented-Creativity-Bridging-the-real-and-virtual-worlds-to-enhance-creative-play.pdf>

[4] <https://studios.disneyresearch.com/app/uploads/2022/10/Production-Ready-Face-Re-Aging-for-Visual-Effects.pdf>



# STARRY NIGHTS AND DEATH STARS: ON GENERATIVE AI

BY NICOLAS AND KONSTI — TRAPPING PAINTERS INSIDE MACHINES

**WOULDN'T IT BE COOL TO BUILD A LIFE-SIZED DEATH STAR FOR FILMING THE STAR WARS MOVIES? SAY, YOU CONSTRUCT IT RIGHT HERE ON EARTH AND SHOOT IT UP TO SPACE. TO GET CHEWIE, YOU TEACH A GRIZZLY HOW TO CONTROL A SPACESHIP. LIGHT SABERS ARE TINY FLAME THROWERS EMBEDDED INTO A SWORD HANDLE. DISNEY, HIRE ME?**

Sadly, that's not how it's done. (Though the older movies actually did their VFX using close-ups of miniature models <sup>(1)</sup>.) People are boring, so they call up a bunch of computer nerds (like you and me) to make spaceships and aliens and laser weapons using CGI. Usually, this process involves creating 3D models using one of the many available software tools, animating those using complex algorithms, and finally pushing it all through a renderer, making it seem real.

But that's not the only way to do it! Quite recently, there's been a lot of hype surrounding AI text-to-image models like DALL-E, Stable Diffusion, and Generai. You can find a lot of non-technical guides geared towards artists and designers online, but did you ever wonder how they are built on the inside?

## The Basics: Scraping Datasets

The idea is quite simple; you enter text and get an image. The font renderer of your operating system is a text-to-image algorithm. This doesn't need machine learning; you create a font face, loop through all characters in your text, and concatenate the corresponding symbols. <sup>(2)</sup>

Suppose I give you the text prompt "a dog in the ocean," and I want to see an actual dog in the ocean. In that case you'll probably think, "well, I can't write an algorithm for this," so instead you'll say, "alright, I'll hire some machine learning guy who'll do the job."<sup>(3)</sup> (Or maybe you're the machine learning guy!) They'll come back to you and say, "Okay, I can do this, but I don't know what a dog and an ocean look like, so please give me a million images of oceans and a million images of dogs."



Thankfully there's LAION, an open community of generative AI enthusiasts who build crazy things. Their flagship creation is a massive dataset of five billion mostly unfiltered images, fittingly named LAION-5B<sup>(4)</sup>, collected from various sources on the internet. Each image is labeled with a short text that describes it. As a machine learning guy, I promise your machine learning guy will be thrilled.

How did they make this? It's called scraping; they crawl the entire internet and download every image they can find. For the text, you can either parse some byline from the website or take whatever is supplied in the HTML source code's `alt` attribute (which is used by screen readers to describe images). Some people<sup>(5)</sup> question the legality, but precedent<sup>(6)</sup> suggests that this is, in fact, allowed (under reasonable conditions).

### The Early Birds: (Style)GANs

In 2014, a bunch of smart people including Ian Goodfellow introduced **Generative Adversarial Networks** (GANs). Essentially, you have two neural networks: A generator and a discriminator. The generator's job is to generate images, and the discriminator's job is to distinguish them from the training set (say, LAION-5B). Based on that, the generator is assigned a score that it tries to minimize, while the discriminator tries to maximize it. (In some sense, the two compete with each other.)

Initially, one could only get low-resolution black-and-white pictures of well-studied things like numbers or faces. However, over the years, people learned how to get more stability in training, and the computation power of our hardware increased dramatically. With that, we could improve not only in quality but also in size and diversity. In 2018, StyleGAN could generate photorealistic images from faces in full resolution. It was also often impossible for humans to distinguish generated faces from real ones.

[Source: OpenAI](#)



While we can now create near-perfect faces using GANs, we would need to train a second model to generate something different, say dogs. Suppose we want a model that can generate a much larger diversity of images than faces. In that case, the problem gets much more challenging, and the quality decreases. However, over the years, more and more computation power and data was thrown at these models to get better and better images. This was a challenging task because GANs are only sometimes stable to train: Things like mode collapse can happen where the model learns to generate some area of the distribution very well (e.g., pictures about nature) while having trouble with others (e.g., animals).

### The Breakthrough: Diffusion Models

In 2021, a new type of model was presented, confusingly named "Diffusion Models". The idea is to start with random noise and then iteratively denoise it until you end up with your final image (see below). A deep neural network previously trained on that task is responsible for denoising.

The nice thing about diffusion models is that they are more stable during training, making scaling the models much more manageable. Big tech companies could increase the model size and throw billions of images and years of GPU hours at it, and we were left with impressive results.

However, the diffusion model only gives us a limited amount of control over the resulting image. Fortunately, there are options to guide the process with text. Essentially, we stop the diffusion model every few steps and run the image through a specialized image recognition model (a popular choice is OpenAI's CLIP). If the image looks closer to what the user requested, we'll keep going; if it doesn't, we'll undo the last few steps and do the exact opposite. Sounds magical, but works incredibly well!<sup>(7)</sup>





Just like that, the AI text-to-image field exploded. Artists can now write text prompts that describe what they're looking for, and the AI will create it in seconds or minutes. But making those text prompts is harder than you might think! The dataset doesn't only contain beautiful images, so you'll need to tell the model that you want it to look good. Prompt engineering became a science; an example of a dog prompt would be "A beautiful photorealistic picture of a beautiful dog, high-detail, award-winning, 4k". (In practice, the best prompts can have hundreds of words.)



[1] There's a documentary that shows this in detail: <https://youtu.be/vB1DA5jZdIQ>

[2] Some fonts do plenty of subtle things to make texts more readable. [https://en.wikipedia.org/wiki/Ligature\\_\(writing\)](https://en.wikipedia.org/wiki/Ligature_(writing))

[3] The other option is to throw a dog into an ocean and take a picture, which I can't morally recommend.

[4] You can search through LAION-5B here: <https://rom1504.github.io/clip-retrieval/>

[5] There's a lawsuit questioning the careless use of scraped data in machine learning for another AI product, GitHub Copilot. <https://githubcopilotinvestigation.com>

[6] <https://techcrunch.com/2022/04/18/web-scraping-legal-court/>

[7] It's a bit more complicated than that, but that's the gist of it. Some models, such as Stable Diffusion or Imagen, use a different technique called classifier-free guidance instead. Both have advantages and disadvantages.

[8] <https://generai.art>

**HELLO THERE! WE'RE WORKING ON GENERALI, A PROJECT AT THE STUDENT PROJECT HOUSE. SOME OF THE STAR WARS POSTERS SCATTERED IN THIS ISSUE WERE GENERATED BY OUR MODEL. IT IS UNIQUE IN THAT IT DOES EXCEPTIONALLY WELL WITH HIGH-DETAIL AND HIGH-RESOLUTION ARTISTIC IMAGES. AND THERE'S ALSO NO NEED FOR PROMPT ENGINEERING, AS WE HAVE A LANGUAGE MODEL FOR THIS PURPOSE. WE GOT SOME EXAMPLES ON INSTAGRAM AT @GENERALI.ART, OR YOU CAN CREATE YOUR OWN ON OUR WEBSITE<sup>(8)</sup>. PLEASE CHECK US OUT! ALSO, PLEASE SEND US ANY FEEDBACK, IDEAS, OR STORIES TO TEAM@GENERALI.ARTE**

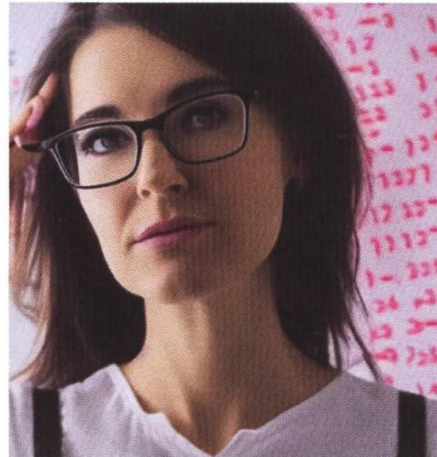


# WAS DICH NACHTS WACH HÄLT

## KOMPETENTE ANTWORTEN AUF SERIÖSE FRAGEN

NACHDEM SICH IHR (SUGARDADDY) EHE-MANN MANFRED KELLER, DER SICH IN EINEM UNGENANNTEN ANDEREN FACH-VEREINSMAGAZIN DEN SORGEN VON STUDIERENDEN ANGENOMMEN HAT, OFFENBAR KLAMMHEIMLICH PENSIONIEREN LIESS, ÜBERNIMMT MANUELA ESTRICH DEN LADEN. DA SIE ABER DIEJENIGE MIT GESCHMACK IN DIESER BEZIEHUNG IST, HAT SIE SICH IHR MEDIUM ETWAS SORGFÄLTIGER AUSGESUCHT.

PROFESSORIN ESTRICH IST AM D-INFK IN DER SMART SOFTWARE GROUP TÄTIG. DORT VERWENDET SIE BLOCKCHAIN, VIRTUAL REALITY UND ARTIFICIAL INTELLIGENCE, UM AUTOMATISCH API'S FÜR ERP-SYSTEME IM METAVERSE ZU GENERIEREN. SIE ENGAGIERT SICH EHR-ENAMTLICH BEI DER SUPPENKÜCHE ZÜRICH UND IST TEIL DER KELLER-KIND-FOUNDATION. BEI DEN VISIONEN HILFT SIE VERZWEIFELTEN STUDIERENDEN UND BEREITET SIE AUF DIE BÖSE WELT DA DRAUSSEN VOR.



PROF. DR. MANUELA ESTRICH

*Sehr geehrte Frau Prof. Dr. Estrich*

*Als das Thema dieser Visionen-Ausgabe durchgesickert ist, hat sich in meinem Kollegenkreis ein Streit entfacht. Können Sie uns helfen und ein für alle Mal klären, in welcher Reihenfolge man die Star Wars Filme am besten schaut?*

*Freundliche Grüsse*

*A.J.A.*



Liebe A.J.A

Kaum zu glauben, dass ich meine Zeit mit sowas verschwende, aber wie immer wünschen die Studis und ich liefere...

Die naheliegendste und gleichzeitig für Comic-Con Teilnehmer kontroverseste ist die **Chronologische Reihenfolge**. Die Linearität darin bietet gerade für Zuschauer, die noch nicht mit dem Franchise vertraut sind, eine sanfte Einführung. Gleichzeitig wird man aber schon am Anfang mit politischen Diskussionen zur Handelsföderation und Jar Jar Binks konfrontiert, was zu einem abruptem Ende des gesamten Unterfangens führen kann. Ausserdem werden in den Prequels Informationen verraten, die man zu Beginn der Sequels besser noch nicht wissen möchte (wer ist nochmal wessen Vater??).

Für eingefleischte Fans sind diese Sequels, also die Filme der ursprünglichen Trilogie, die Kronjuwelen, welche in der Chronologischen Reihenfolge viel zu spät kommen. Deshalb schauen die richtigen Nerds die Filme in der sogenannten **Release-Date Reihenfolge**, also in der Reihenfolge, wie sie herausgegeben wurden. Dabei wird man aber unumgänglich dazu gezwungen, alte Filme ohne tolle Special-Effects mit ETH-Einfluss zu schauen, was heutzutage auch nicht mehr jedermanns Sache ist. Ausserdem steigt man halt mittendrin in eine Handlung ein.

Als Kompromisslösung dieser beiden Ansichten hat sich mal jemand die sogenannte **Machete-Reihenfolge** ausgedacht, wo der richtige Spass beginnt. Dabei startet man zwar mit den beiden ältesten Filmen A New Hope und The Empire Strikes Back, springt dann aber zu den Prequels und schaut Attack of the Clones und Revenge of the Sith. Das soll eine Art logisches Flashback kreieren, wo man in die Vergangenheit von Darth Vader sieht, nachdem man frisch herausgefunden hat, dass er Luke's Vater ist. The Phantom Menace wird weggelassen, weil er nicht besonders relevant für die Geschichte (und einfach schlecht) ist. Nach dem etwas längeren Flashback springt man dann zurück ins "Jetzt", womit der Beginn von Return of the Jedi gemeint ist. Die zusätzlichen Informationen aus den Prequels sollen die Spannung beim finalen Kampf noch mehr erhöhen, da man jetzt auch die Geschichte des Bösewichts kennt und weiss, was alles auf dem Spiel steht. Der Nachteil bei dieser Reihenfolge ist aber, dass sie nicht wirklich skaliert, da man die weiteren Filme nicht einfach reinquetschen kann. Was machen wir z.B. mit The Force Awakens? Da wir bei dieser Reihenfolge die Geschichte von Luke ins Zentrum stellen, müssten wir vielleicht mit diesem Film beginnen, was aber ja bereits wieder Informationen zu den Sequels verrät, die wir noch nicht kennen. Du merkst: Es wird kompliziert.

Und die beste Reihenfolge, in der man Star Wars schaut, ist: Gar nicht. Ich persönlich habe keine Zeit für Filme, ich muss arbeiten.

Liebe Grüsse

Prof. Dr. Manuela Estrich



Hast du eine Frage? Schreibe noch heute an [visionen@vis.ethz.ch](mailto:visionen@vis.ethz.ch) und wir leiten sie der vielbeschäftigten Professorin anonym weiter!

**I ASKED SOME ACTIVE VIS MEMBERS FOR THEIR FAVORITE STAR WARS SCENES AND WILL ALSO GIVE YOU THEIR EXPLANATION IF PROVIDED.**

## **WHAT IS YOUR FAVORITE STAR WARS SCENE?**

**FIONI - ASKING THE REAL QUESTION HERE**

### **Jason Zibung**

Episode V: Yoda pranking Luke in the swamp in the Dagobah-System before becoming Luke's Master.

### **Yves Hersener & Pascal Strebel**

Episode III: Anakin burning.

### **Cashen Adkins**

Episode VI: Luke taking off Darth Vaders Mask and them looking each other in the eye as father and son.

### **Michael Keller**

The opening scene with the scrolling text.  
Because as a child he was proud to be able to read it fast enough.

### **Julia Bogdan**

Episode III: Obi-Wan jumping down "Hello there" or Episode I: Qui-Gon and Obi-Wan fighting Darth Maul.

### **Joel Bucher**

Episode IV: The destruction of the Deathstar.

### **Jonas Blank**

The Mandalorian: You can find the scene on YouTube under "scout trooper mandalorian scene"  
Andor: Corporate security enthusiasm

### **Florence Kissling**

Episode III: "This is how democracy dies" <sup>(1)</sup>

### **Andreas Brombach**

Episode III: Anakin entering the Jedi temple with the clones. Because the music and the flow of the whole scene is epic. Although it's rather unlikely how fast Anakin is ready to slaughter his former colleagues.

### **Konstantin Wohlwend**

The Rise of Skywalker: The Death of Ben Solo.  
Because Kylo Ren was a cool character and movies tend to spare the lives of all cool characters.

### **Robin Schmidiger**

Episode III: General Grievous using 4 lightsabers at once and doing the helicopter.



**John Staib Matilla**

Episode VI: Darth Vader saves Luke then dies.

**Fabian Ruckstuhl**

Episode V: "I am your father" <sup>(2)</sup>

**Fiona Pichler** <sup>(3)</sup>

Episode V: Han Solo hiding Luke from the cold in a huge animal.

**Mark Csurgay**

Episode II: Obi-Wan jumping down "hello there".

**Marc Widmer**

Episode VI: The Battle with the Ewoks.

**Alex Frey**

Episode III: Darth Vader awakens

**Johan Stettler**

Episode IV: Luke watching the double sunset. It is the moment he makes the decision to take his fate in his own hands. Also, the music always gives Johan goosebumps.

**Manuel Hässig**

Episode III: Yoda fighting Darth Sidious. Because you can finally see Yoda's powers.

And which is your favorite Star Wars scene?



[1] Maybe it's "this is how liberty dies" but the internet is not sure whether both are correct.

[2] or whatever the correct quote is, you know which scene.

[3] Yes, this is me.

**THE EWOKS ON ENDOR LOVE BANANAS. AFTER THE BATTLE OF ENDOR, HAN SOLO WANTS TO GIFT THEM LOADS OF BANANAS. THERE IS A BANANA PLANTATION 3000KM AWAY FROM BRIGHT TREE VILLAGE, THE HOME OF THE EWOKS. HAN HAS GOT 3000 BANANAS. HE ASKS CHEWBACCA'S COUSIN CHUCKBANA TO TRANSPORT THE BANANAS FOR HIM. HOWEVER, CHUCKBANA EATS 1 BANANA PER 1KM, AND HE CAN ONLY CARRY A MAXIMUM OF 1000 BANANAS. WHAT IS THE MAXIMUM AMOUNT OF BANANAS CHUCKBANA CAN TRANSPORT TO BRIGHT TREE VILLAGE?**

# THE LAST ALGORITHM

LUKAS ALTUN  
LIKES HAN SOLO MORE THAN  
LUKE SKYWALKER



# Praxiseinblicke mit Aussicht in die Zukunft



Sichere dir jetzt dein IT-Praktikum bei BSI!  
[www.bsi-software.com/karriere](http://www.bsi-software.com/karriere)











VLNR

Johan Stettler, Pascal Strebel, Lukas Altun

Constantin Mussaeus, John Staib Matilla, Tobias Scheithauer, Fiona Pichler, Clemens Bachmann

## Dein Artikel im VISIONEN

Alle Leserinnen und Leser sind immer herzlich eingeladen einen Artikel im VISIONEN zu veröffentlichen. Hast du etwas, das du anderen mitteilen willst? Warst du im Ausland und willst von deinen grossartigen Erfahrungen berichten? Hast du Lust einen Artikel zu schreiben aber keine Idee? Schreib uns und wir brainstormen zusammen. Natürlich können auch nicht-Informatikstudierende Artikel einreichen.

Infos, wie du einen Artikel schreiben kannst, findest du unter <https://visionen.vis.ethz.ch>

# Impressum

# VISIONEN

Magazin des Vereins der Informatikstudierenden an der ETH Zürich (VIS)

## Ausgabe Dezember 2022

**Periodizität**  
**Auflage**

6x jährlich  
3000

### Chefredaktion

Tobias Scheithauer  
[chefredaktor@vis.ethz.ch](mailto:chefredaktor@vis.ethz.ch)

### Cover

Xiaoyuan Jin  
Sophia Boyer

### Posters

generai.art

### Layout

Fiona Pichler  
Johan Stettler  
[layout@vis.ethz.ch](mailto:layout@vis.ethz.ch)

### Anschrift Redaktion & Verlag

Verein der Informatikstudierenden (VIS)  
CAB E31  
Universitätstr. 6  
ETH Zentrum  
CH-8092 Zürich

### Inserate (4-farbig)

½ Seite	CHF 1000.–
¼ Seite	CHF 1800.–
¾ Doppelseite	CHF 4000.–
¼ Seite, Umschlagsseite (U2)	CHF 3000.–
½ Seite, Rückumschlag (U4)	CHF 3000.–
Andere Formate auf Anfrage.	

### Redaktion

Tobias Scheithauer  
Pascal Strebel  
Fiona Pichler  
Clemens Bachmann  
Constantin Mussaeus  
Jan-Philipp Kirsch  
John Staib Matilla  
[redaktion@vis.ethz.ch](mailto:redaktion@vis.ethz.ch)

und freie Mitarbeiterinnen und  
Mitarbeiter

### Inserate

Lukas Altun  
[inserate@vis.ethz.ch](mailto:inserate@vis.ethz.ch)

### Lektorat

Pascal Strebel  
Tobias Scheithauer  
Constantin Mussaeus  
Jan-Philipp Kirsch  
Manuel Hässig  
[lektorat@vis.ethz.ch](mailto:lektorat@vis.ethz.ch)

### Druck

Sprüngli Druck AG  
5612 Villmergen  
<http://www.spruenglidruck.ch/>

### Copyright

Kein Teil dieser Publikation darf ohne ausdrückliche schriftliche Genehmigung des VIS in irgendeiner Form reproduziert oder unter Verwendung elektronischer Systeme verarbeitet, vervielfältigt oder verbreitet werden. Offizielle Mitteilungen des VIS oder des Departements für Informatik sind als solche gekennzeichnet.

© Copyright 1984–2022 VIS. Alle Rechte vorbehalten.

Die VISIONEN werden klimaneutral gedruckt.



Der VIS ist Teil des Verbandes der Studierenden an der ETH (VSETH).



# THE JEDI CODEX OF ETH

A student is here at ETH for the sake of knowledge and science.

A student attends all classes and exercise sessions in the semester.

A student is up to date with all exercises and projects.

A student understands that every exercise and project is intended for the student to grow and understand the subject better.

A student selects courses based on personal interests.

A student understands that estimating the workload for a course is nearly impossible to make, as students have different prior knowledge. Thus, 8 KP is understandably not always the same workload.

A student never copies homework from peers.

A student prepares for an exam by understanding the theory of the lecture.

A student keeps a healthy work-life balance by also doing sporty activities and meeting with friends.

A student helps to clean the coffee machine in the student's lounge.

A student will finish the Bachelor in 6 and the Master in 4 semesters.

A student in need will seek guidance with the study administration team.

A student can be found around 5 am at the university studying early due to a huge amount of motivation

A student joins the HoPo to change the ETH live positively.



Falls unzustellbar, bitte zurück an:  
 Verein der Informatikstudierenden  
 CAB E31  
 Universitätsstr. 6  
 ETH Zentrum  
 CH-8092 Zürich

AZB  
 PP/Journal  
 CH - 8092 Zürich  
 Post CH AG

Frau  
 Janine Dädler  
 ETH-Bibliothek  
 Digicenter  
 Rämistrasse 101  
 8092 Zürich



# EDITORIAL II

## ROGUE JUAN

*Did you ever hear the tragedy of Darth Björnus the Wise? It's not a story the Department would tell you. It's a VIS legend. Darth Björnus was a dark Lord of the VIS, so powerful and so wise he could use the Force to influence the Midichlorians to party 24/7, yet still maintaining a GPA of 5.8. He had such a knowledge of the dark side of ETH that he could even keep the ones he cared about from failing Algo Lab. The dark side of the Force is a pathway to many abilities some consider to be unnatural and lazy. He became so powerful... the only thing he was afraid of was not having enough courses that one can cheese through, which eventually, of course, happened. Unfortunately, he taught his apprentices everything he knew, then his apprentices surpassed him, becoming TAs knowing all the cheesy tricks, leading to fewer easy courses. Kinda ironic. He could save others from dropping out, but not himself... Now, he is studying Electrical Engineering instead.*

Despite Björnus' disappearance, there are still a lot of students within VIS following the dark path of studying. This issue contains some vague ideas and hints to that, such that we can protect the codex from the forces of the Department. This is of course an exaggeration, but not completely far from the truth. No student is purely following the good codex, nor the dark path. Students are on the spectrum between these two extrema, which is something everyone has to accept, especially the Department.

Who am I? Oh, I am just the layouter who went a bit rouge with the idea of splitting this issue into the light and dark side of the Force, turning it literally upside down. I am having too much fun with that. This may be of course confusing, but I hope you enjoy this issue nonetheless. If you think you might enjoy this kind of work, then join us, and together we will rule over the realm of the Student Lounge by having the coolest magazine design on the playground. You can reach us via mail or just walk into the oVIS and ask for Juan. Merry Christmas!

Juan

# CONTENT

## **BJÖRN WARS - THE JEDI WAY ON THE FRONT SIDE OF THIS ISSUE**

## **BJÖRN WARS - THE DARK SIDE**

The Politics Menace	6
ASCII Wars	7
The Revenge of the blitz	8
Der VIS Esiberg	10
The Shire Strikes Back	14
Star Wars - the correct order	16
Star Wars badly explained	19
Björn goes Polylan	20
FIGUGEGL Impressions	22
Random Memes	24
The Sith Codex of ETH	26







# THE POLITICS MENACE

PASCAL STREBEL

**LEVERAGES THE DARK SIDE OF THE FORCE  
TO SPREAD HIS HOPO-SHENANIGANS**

Turmoil has engulfed the VIS HoPo. The introduction of more diversity, inclusivity and mental wellbeing in everyday study life is in dispute. Hoping to resolve the matter with an outsourced counselling centre<sup>[1]</sup>, ETH has forged an alliance with UZH for once.

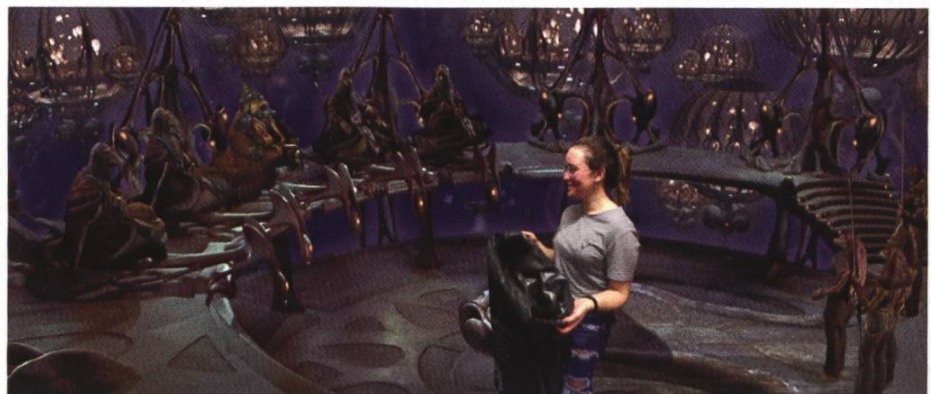
While the congress of VIS (aka HoPo) endlessly debates this alarming chain of events, they have launched some further mock missions to endlessly discuss even more topics. These are pursued by squadrons, as they call themselves, which of course are all very important and constantly reassure each other of that fact. Critical parts of their missions include writing e-mails full of spelling mistakes, making incoherent comments and eating pizza on VIS's neck.

**A LONG TIME AGO, IN A  
COMMITTEE FAR AWAY FROM  
BEING USEFUL...**

A glimmer of light at the end of the tunnel for prospective Bachelor graduates could however be the possibility of a graduation ceremony, a huge undertaking from the HoPo's point of view, which accordingly also takes an immense amount of time to plan. Let's hope that our heroes actually get something done this semester...



[1] <https://www.pbs.uzh.ch/de.html>



**OUR HOPO PRESIDENT PROUDLY PRESENTING HER ACHIEVEMENTS  
TO THE GUNGAN HIGH COUNCIL**



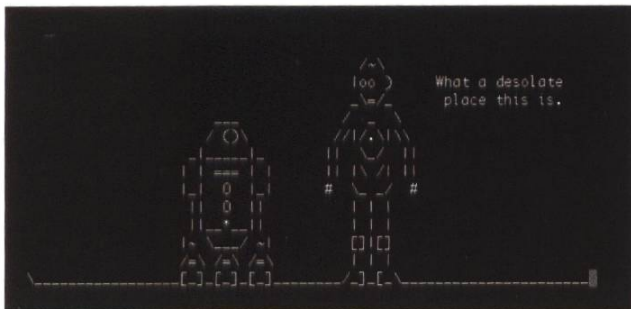
# ASCII WARS

JOHAN STETTLER

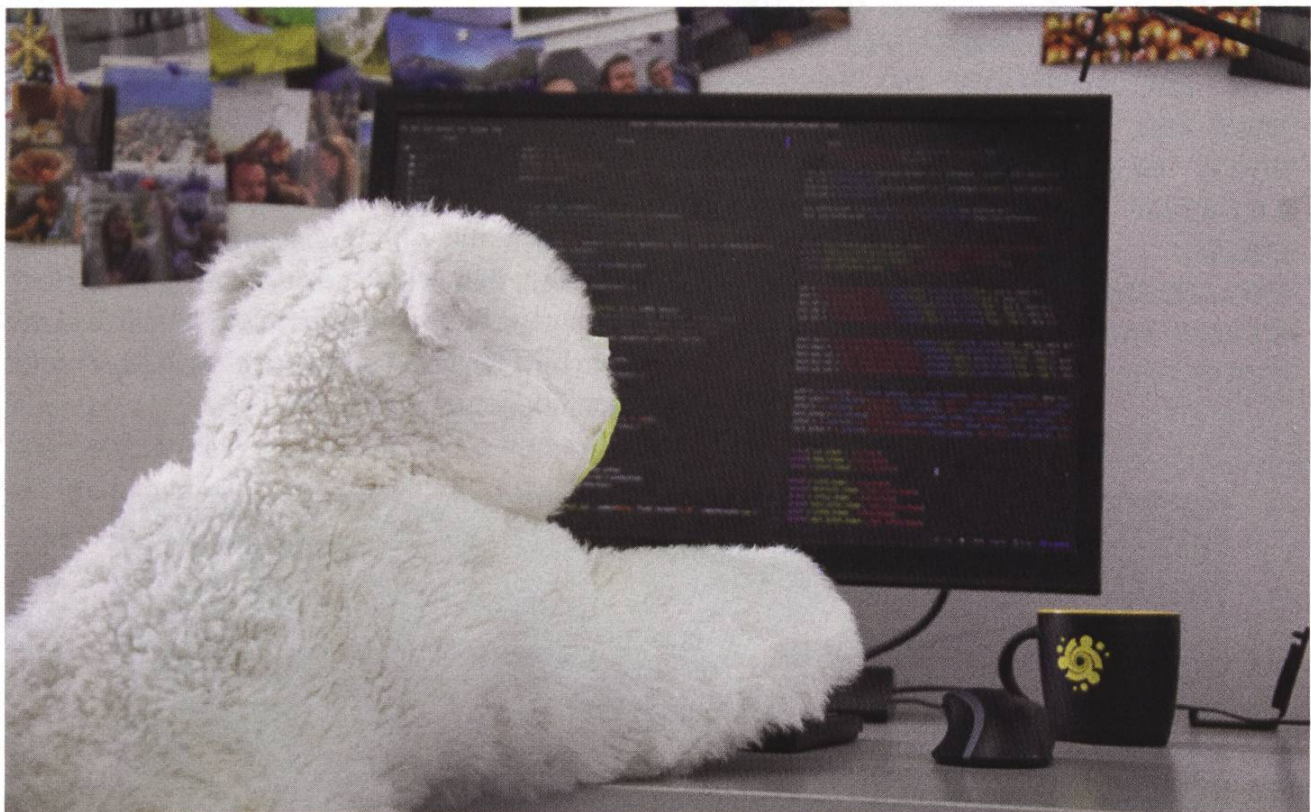
DOWNLOADED THE WRONG STAR WARS FILM

**YOU CAN WATCH STAR WARS IN YOUR  
TERMINAL**

**SUDO APT INSTALL TELNET  
TELNET TOWEL.BLINKENLIGHTS.NL<sup>(1)</sup>**



[1] As of the writing of this article, this server was still online. It does not work within the ETH VPN. You can also watch it on youtube, but it is not as cool as running it in your own terminal.





ALS ICH LETZTENS GEMÜTLICH EINES MEINER 5 GRATIS BIERE IM AMIV-BÜRO GETRUNKEN HABE, FÄLLT MIR EINE NEUE MAIL IN MEINER INBOX AUF. SUBJECT: "VISIONEN X BLITZ". WAS IST NOCHMAL VISIONEN? ACH JA, DAS IST DOCH DIE FACHZEITSCHRIFT DES VIS. ICH MAG MICH NOCH AN EINEN FEUERLÖSCHER-KONFLIKT ERINNERN, DER ETWAS MIT DEN VISIONEN ZU TUN HATTE. SONST SAGT MIR ABER DER BEGRIFF VISIONEN NICHT SO VIEL. OB DAS DARAN LIEGT, DASS ICH NOCH NICHT SO LANGE IM AMIV AKTIV BIN, ODER OB IHR NAME EINFACH NICHT SO EINE GROSSE BEDEUTUNG HAT, SEI IN DEN RAUM GESTELLT. DIE VISIONEN BITTEN UNS UM HILFE BEI IHRER NEUEN AUSGABE! DIESE HUMANITÄRE AUFGABE NEHMEN WIR NATÜRLICH GERNE AUF UNS. UM MEINER ERINNERUNG ETWAS AUF DIE SPRÜNGE ZU HELFEN, WAS DIE VISIONEN ÜBERHAUPT SIND, BLÄTTERE ICH MIR DIE LETZTEN PAAR AUSGABEN DIESES JAHRES DURCH. IM FOLGENDEN FASSE ICH EUCH ETWAS MEINE BEOBACHTUNGEN ZUSAMMEN.

# THE REVENGE OF THE BLITZ

BLITZ

NOT THE BYLINE YOU ARE LOOKING FOR

Erst einmal fällt mir auf, dass sie nicht gerade wenig Inserate haben. Vor allem auf die Migros-Werbung bin ich schon ein bisschen neidisch. Neugierig schaue ich mir die Inserat Preise an. Ganz schön teuer.

Weiter geht's. In der zweiten Ausgabe dieses Jahres finde ich die VIS-Notenstatistiken. Wenn ich schnell etwas auf Excel auswerten will, benutze ich auch oft die 2D-Säulendiagramm-Formatvorlage. Von Informatikern hätte ich aber eigentlich etwas anderes erwartet. Auch der Schnitt der Prüfungsnoten und wie viel Prozent bestanden hat, wird hier leider nicht gezeigt. Muss man das selbst ausrechnen?

In der dritten Ausgabe dieses Jahres lese ich eine Fanfiction über einen Visionär und die VIS-Server. Das Bild, welches ich bis jetzt über die Informatiker hatte, bestätigt sich. Ich muss zugeben, dass ich diese Ausgabe zum Teil doch noch ganz finde okay. Vor allem den Artikel mit dem blitz Review der Fachvereine (blitz schreibt man übrigens klein).





Dann die vierte Ausgabe des Jahres. Wieder fällt mir die etwas fragwürdige Gestaltung der Notenstatistiken auf. Gleich danach finde ich einen Artikel, in dem sich der VIS bereiterklärt, für unsere Fragen da zu sein. Das hatte ich wohl leider übersehen. Aber zum Glück habt ihr euch ja nochmal direkt bei uns vom blitz gemeldet.

Schon sind wir bei der aktuellen Ausgabe dieses Semesters. In der es schonwieder Notenstatistiken gibt. Das Rating der Büros macht mich neugierig, auch wenn es nur mehr oder weniger objektiv erscheint<sup>(1)</sup>. Den Artikel über die Drucker finde ich super, ich vermute jeder hatte schon seine Unstimmigkeiten mit den ETH-Druckern. Zu meiner Enttäuschung finde ich aber auch noch ein Meme, welches sich über unseren Gastartikel vom Mandala Hans, dem PH Student, lustig macht. Da wir mittlerweile eine gute Beziehung mit ihm pflegen, habe ich es natürlich weitergeleitet. Er reagierte verständnisvoll und auch gar nicht überrascht auf dieses, wie er es nennt, 'heimtückische Internet-LoL-Bild': «Mir war schon immer bewusst, dass die Kombination aus Sportabsenzen und übermässiger Bildschirmzeit einen negativen Einfluss auf die Umgangsformen sowie die Konfliktbewältigungsstrategie von lebendigen<sup>(2)</sup> Kindern hat.» Auch fiel mir der erstmalige Auftritt einer sogenannten Prof. Dr. Manuela Estrich auf. Falls die Visionäre neue Ideen brauchen, wie sie ihre Ausgaben füllen können, dürfen sie das nächste Mal auch gerne direkt auf uns zukommen, anstatt sich an mitleiderregenden Nachahmungen zu versuchen. So können zukünftig vielleicht einige Peinlichkeiten erspart bleiben. Trotzdem sind wir geehrt, einen so signifikanten Teil der Visionen zu sein, dem sie einen grossen Teil ihrer Ausgabe widmen.

Nun zu meinen allgemeinen Eindrücken. Als Maschinenbaustudentin muss ich zugeben, dass die Rätsel in den Visionen nicht ganz meinem Metier entsprechen. Mir fehlen Sudoku, Binoxxo oder Dot-to-Dot, welche im blitz zu finden sind<sup>(3)</sup>. Immerhin füllen diese Informatikrätsel ein paar Seiten. Falls ihr jedoch weiterhin etwas Mühe habt mit dem Layout, könnt ihr gerne mal eine Mail an uns schreiben, unsere inDesign-Profis würden euch vielleicht noch ein paar Tipps geben.

Zum Schluss möchte ich mich beim VIS aber noch über die Kaffeemaschinen bedanken. Wir haben zwar im AMIV Büro auch selbst noch eine Kaffeemaschine, über die ich auch sehr froh bin, wenn es mal wieder bei den VIS-Maschinen tagelang an Kaffeebohnen fehlt, aber von der Qualität kann diese dann doch nicht ganz mithalten.

Nach meiner Nachfrage habe ich ausserdem erfahren, dass die armen Studierenden im VIS-Team nicht in den Genuss einer gratis Pizza als Dank für ihr freiwilliges Engagement in der Fachzeitschrift bekommen. Vielleicht gibt es ja auch für die Visionäre in Zukunft mal die Möglichkeit, etwas im blitz zu schreiben, dann versorge ich euch natürlich sehr gerne mit einer Pizza.



[1] Zumindest die Bewertung der Sofas.

[2] ritalinabhängigen





**Legacy**

**Kaffeesponsoring**

**Mailalias**

**G.W. Vorstandsfoto**

**Babybjörns Odyssee**

**KP Korb**

**SRF Auftritt**

**Eventmanager**

**Serverdiebstahl**

**Steuerhinterziehung**



WEISST DU, WANN DER VIS  
GEGRÜNDET WURDE? LITERAL-  
LY 1984. SEITHER SIND SCHON  
FAST 40 JAHRE VERGANGEN,  
IN DENEN AUCH SCHON EINGES  
AN SCHABERNACK GETRIEBEN  
WURDE. ICH HABE MIT ALTVOR-  
STÄNDEN GESPROCHEN UND DIE  
ARCHIVE DURCHSTÖBERT UND  
MÖCHTE MEINE FUNDE HIER IN  
DIESEM ARTIKEL PRÄSENTIEREN.

# DER VIS EISBERG



BEGIBT SICH IN DIE TIEFEN DER VIS LORE

## Level 1

**Legacy** - Der Leiter der Akademischen Dienste der ETH, (Dr.) Hermann Lehner, ist ehemaliger Präsi des VIS und hat auch für die Visionen geschrieben. Er hat den Originalen Björn eingekauft. Dr. Ghislain Fourny war auch einmal Vorstand, er hat die Prüfungssammlung gemanaged und war dann auch Vizepräsi.

**Kaffeesponsoring** - Der VIS suchte eine Firma, die Kaffee im Aufenthaltsraum sponsern sollte. Man fand hierfür auch Interessen. Es kommt zu einem Meeting mit einem dieser ungenannten Interessenten bei Kaffee, wo der VIS die Rechnung bezahlt. Es kam nie zu einem Vertrag und es wurde nie eine Rechnung ausgestellt. Jedoch hing eine damit verbundene (stark verpixelte) Werbung für mehrere Jahre im Aufenthaltsraum, welche die Existenz eines solchen Sponsorings implizierte.

**Mailalias** - Ein VISler versuchte die Weiterleitung von 🍌@vis.ethz.ch <sup>(1)</sup> auf seine eigene Adresse einzurichten. Da Emojis vom Mailserver nicht unterstützt werden, wurden neu erstellte Aliase für ca. 3 Monate nicht synchronisiert, bis der Fehler von der CIT entdeckt wurde. <sup>(2)</sup>

**G. W. Vorstandsfoto** - Ein ehemaliges Vorstandsmitglied war nicht beim Vorstandsfoto anwesend. Per Photoshop wurde er nachträglich eingefügt und wurde zum internen Meme, indem er auf diversen anderen Bildern zusätzlich eingefügt wurde. Ein Antrag an der MV um einen Pappaufsteller von ihm anzuschaffen wurde leider abgelehnt. Sein Antlitz kann man dafür noch heute im Aufenthaltsraum bewundern, angeheftet an einem der Fenster vom oVIS.

[1] Anmerkung des Layoters: Ich habe leider kein Mittelfinger gefunden.

[2] Siehe Visionen Ausgabe 19/5

[3] Es gibt einfach gewisse Standards, die wir im Gegensatz zu Vereinigungen wie zum Beispiel der FIFA nicht erfüllen. Gemeinnützigkeit befreit aber nicht automatisch von Steuern. Die FIFA erhält beispielsweise „nur“ eine Reduktion.



## Level 2

**Babybjörns Odyssee** - Das Erstgeborene des heissgeliebten VIS-Maskottchens Björn mit dem kreativen Namen Babybjörn wurde entführt. Hierbei wurde vor allem die VCS verdächtigt. Danach tauchte plötzlich ein Blog im Internet auf, wo man Fotos mit Babybjörn an verschiedensten Orten auf der Welt bestaunen konnte. Der Blog wurde dann irgendwann nicht mehr weitergeführt und ist jetzt leider nicht mehr abrufbar. Nach momentanem Stand ist Babybjörn leider verschollen. Die Baseballschläger im oVIS wurden für die Rettung von Babybjörn angeschafft.

**Kontaktparty Korb** - Nachdem eine Firma die Anmeldung für die Kontaktparty verpasste, versuchte sie mit allen Mitteln doch noch einen Platz zu ergattern und kontaktierten unter anderem das ETH Career Center, die ETH selber und den VIS, welche sie wieder zur Kontaktparty weiterleiteten. Als letzten Ausweg versuchten sie eine Gipfeli-Verteilaktion vor dem Messeeingang zu starten, die jedoch glücklicherweise verhindert werden konnte.

**SRF Auftritt** - Der VIS wurde von SRF gefragt, ob sie bei ein Firmenevent filmen dürfen. Da die Anfrage erst am Tag des Events eintraf, schaffte es der VIS nicht rechtzeitig zu antworten. Aufgrund dieser Funkstille wendete sich das SRF direkt an die Firma, welche, ohne sich mit dem VIS vorher abzusprechen, zusagte und die gratis Werbung gerne annahm.

**Eventmanager** - Um sich für Events anzumelden, wurde früher ein selbst programmiertes Tool verwendet. Um diesen Prozess zu vereinfachen, entschied man sich, richtig viel Geld in die Hand zu nehmen. Sage und schreibe 50'000 Schweizer Franken nahmen wir in die Hand. So wie das bei Softwareprojekten üblich ist, mussten noch weitere 15'000 Franken zusätzlich investiert werden, um das Tool in unsere Website einzubinden. Um die 65'000 in Perspektive zu setzen: Das entspricht etwa vier Aufenthaltsraum-Kaffeemaschinen. So haben wir es geschafft unser, doch eher begrenztes, selbstgemachtes Tool durch ein overengineerte, überkomplizierte Neuentwicklung zu ersetzen.

## Level 3

**Serverdiebstahl** - Es fehlte ein Server im VIS Serverraum. Dieser wurde von einem ehemaligen Vorstand „ausgeliehen“. Nach vielfachem Nachfragen und einem Hausbesuch tauchte er bei einer Firma, bei welcher der ehemalige Vorstand gearbeitet hat, auf.

**Steuerhinterziehung** - Der VIS hat über längere Zeit keine Steuern gezahlt. Es stand auch die Möglichkeit im Raum, den Status „gemeinnützig“ zu erlangen und sich von der Steuerpflicht zu befreien. In einer Konsultation mit einem Anwaltsbüro kam heraus, dass die Erfolgschancen für ein solches Unterfangen doch eher marginal sind<sup>(3)</sup>. So entschied man sich, in den sauren Apfel zu beissen, sich selbst anzuzeigen und eine Summe von fast 30'000 CHF nachzuzahlen.







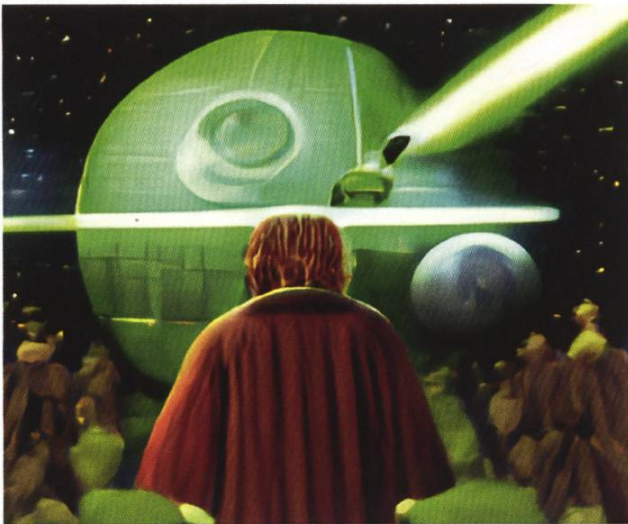


WHEN I DO IT, IT IS CONSIDERED A BREACH OF ACADEMIC INTEGRITY. WHEN GEORGE LUCAS DOES IT, HE CREATES A BILLION-DOLLAR FRANCHISE THAT WILL LATER BE BOUGHT OUT BY MICKEY MOUSE. BUT WHERE EXACTLY IS THE LINE BETWEEN BEING INSPIRED BY THE WORK OF OTHERS AND BLITHELY COPYING?

## THE SHIRE STRIKES BACK

PASCAL STREBEL

STILL WAITING FOR HIS LETTER FROM HOGWARTS SINCE HIS TENTH BIRTHDAY



In order to approach this line somewhat, let us first consider the following rather generic plot: *A cranky boy is snatched from his ~~boring~~ peaceful world by an old bearded man, inherits some kind of magical artifact and suddenly finds himself in a battle between good and evil, destined to defeat evil...*

Does that **ring** a bell? Whether it's the original Star Wars trilogy, Lord of the Rings or even Harry Potter, we know this pattern far too well not to notice it. You can almost put Hangover in this same drawer if you consider Stu the cranky boy, Alan the bearded old man and roofies the magical artifact. Well then, maybe that's just a promising storyline, you might think to yourself now. But the inspiration of LOTR on Star Wars is by no means limited to the basic plot, no, the real thing just starts there.





Do you know that elderly British actor who used to dub himself in like 10 languages, ruining several potential real-life jobs? I mean the one who played Saruman AND Count Dooku, and also in the respective fictional world boosts unemployment by megalomaniacally spawning countless robots/clones. Are we still supposed to think it's a coincidence that the same guy plays a character in two different franchises who was originally one of the good guys, but then lives long enough to see himself become a villain, fall into obscurity and ultimately fail miserably?



To top that, rumour has it that at one point George Lucas even considered casting Luke and Leia as little people. Wait a minute, where else do we know little people from? Oh yes, it's the bloody hobbits! Although Midget-Luke apparently didn't become a thing, this idea of using diminutive heroes to emphasise the victory of the little fellows over larger forces of evil does come to fruition in Star Wars as well, in the form of the cute little Ewoks that overthrow the nasty Storm Troopers! And where do they live? On a forest moon called Endor, which means "Middle Earth" in Elvish.

After all, it really can't be denied anymore that Star Wars is strongly influenced by Lord of the Rings (and somehow of course also by WWII, like everything else that came after). But in a way, it's also pretty cool that all my nostalgic childhood memories are connected in so many ways (not referring to WWII here).



These slightly shittier AI images have not been created by generai.art





**ARE YOU ONE OF THOSE PEOPLE THAT, LIKE ME, TRIED MORE THAN ONCE TO USE THE FORCE FOR GRABBING YOUR TV REMOTE? CAN YOU ALSO NOT STAND PROLES MAKING FUN OF YOU FOR WATCHING THE ORIGINAL TRILOGY AT LEAST ONCE A YEAR, DRESSED IN A BATHROBE, FENCING WITH YOUR TOY LIGHTSABER? ARE THE NAMES OF YOUR FUTURE TWINS ALREADY SET TO BE LUKE AND LEIA? IF YOU HAD TO ANSWER AT LEAST ONE OF THESE QUESTIONS WITH "YES", I DEDICATE THIS ARTICLE TO YOU, BECAUSE THE FORCE IS STRONG IN US!**

## **STAR WARS THE CORRECT ORDER**

**RUCKI – TAKES EVERY POSSIBILITY TO DO  
STAR WARS STUFF INSTEAD OF STUDYING**

I often find myself brainstorming about what occurs to be the preferable order to watch all Star Wars movies (at least the ones you can watch without getting brain aneurysms). This often exceeds into long discussions with friends whose knowledge of the Force ranges from Coleman Trebor to Pre-Disney Luke Skywalker. Not seldom, these discussions do not end in unison.

It seems this topic appears to be controversial, who would have thought it, regarding the fact that we are talking about the Holy Grail, the Birth of modern Nerd-culture: Star Wars!

To spare you of possible friendship-ending discussions I hereby present you with my personal state regarding said question of movie order. I will provide multiple options, because obviously watching Star Wars for the first time with your future Luke and Leia is not comparable to your yearly May the Fourth marathon.



### **Option 1: Experience the Magic**

#### **4, 5, 6, 1, 2, 3, (Rogue One)<sup>(1)</sup>**

This option provides you with an experience as close as possible to the way the original movies lighted their fire in all our hearts. In my personal opinion, the way to describe it best is probably a safe bet. Therefore, I recommend this order if you find yourself watching Star Wars with somebody who was in a coma for the last 50 years or so and has by a miracle never seen or heard any major plot points. To start your journey with the original trilogy provides you with an easy start to experience the whole cosmos and not get overstimulated by a very complex universe. I sadly made this experience once with my brother, who has never seen anything of Star Wars beside my toys, what obviously resulted in many questions I had to answer. So, one day I grabbed him and inserted our VHS (yes I am that old...) of The Phantom Menace. Sadly, the movie didn't inspire the same spark in him that somewhat changed my life. In hindsight I could have predicted this. Without context, The Phantom Menace is a really weird story, and you will end up with more questions than before you have started. It took me almost a year to convince him to give Star Wars another go, this time with the mentioned order, and who would have guessed: It was a success!

Rogue One is kind of weird. Don't understand me wrong: I love Rogue One, but it spreads a really dark and depressing feeling and if you watch it directly before A New Hope it just doesn't work. You will miss some of the fairytale magic the original trilogy provides. So, I'd recommend you to either skip it or watch it after Revenge of the Sith. Rogue's depressive feel kinda fits the end of Revenge.

### **Option 2: The Marathon**

#### **1, 2, 3, Rogue One, 4, 5, 6**

I think this doesn't need much explanation. If you want to rewatch all the movies, then just go for the chronological order. The biggest advantage of this option compared to any other is, that after 10 minutes into the second movie you won't see any more scenes with Jar Jar Binks...

Don't forget to make a food break after watching Rogue, or otherwise you might find yourself dealing with the problems mentioned in Option 1. Furthermore, it helps with not falling asleep, because the original trilogy does not have as much pace as most older movies.



### Option 3: The Modern Storytelling Approach

4, 5, (1), 2, 3, (Rogue One), 6<sup>(2)</sup>

This is my personal favourite! Option 3 combines the picturesque start to the series with the original trilogy and inserts right after Lukes ordeal death and rebirth, to quote The Hero's Journey, the prior origin story of Vader and finishes with a true crescendo and the actual ending of Star Wars.

The major problem with this order is, due to its cliff-hanger nature, the fact that after two movies, you have to watch 3 mediocre (and optionally one for the progress of the greater story and backstory) unnecessary movies. Due to this circumstance, this order is not recommended if you're a first-timer, unless your watchbuddy has a lot of endurance and doesn't get confused easily. To counteract this, you can skip The Phantom Menace or watch a shortened fan edit where every scene with Jar Jar and all other useless scenes (I talk about you Gungans...) is cut, so you are left with a quite okay one-hour movie.

### Option 4: Release Date

4, 5, 6, 1, 2, 3, 7, Rogue One, 8, Solo, 9

I do not recommend this order as it makes no sense and I only list it because I had a hefty discussion once with someone who in her own words "Can't watch old movies straight after seeing a modern one". Luckily, this is technically the same as option 1, you only have to convince your watchbuddy that the sequels and Solo are garbage

### Option 5: The one the Java.util.random class decides for me and would make Quentin Tarantino proud...1, 6, 3, 2, 5, 4

Well, this looks... random. At least you leave Jar Jar behind you after the first movie (beside the short "cameo" in Attack of the Clones). In proper Tarantino fashion you somewhat start with the final exposition after an establishing prolog. Now, we experience some asynchronous character development and finish our session with the best (The Empire Strikes Back and A New Hope), concluding with Luke blowing up the Death Star, receiving his medal and the most satisfying movie credits in history. I am somewhat not disappointed.



[1] I know there exist more Star Wars movies than the ones I try to set in order, but due to obvious reasons I leave out everything post Disney that is worse than Phantom Menace (So everything besides Rogue One)

[2] This one is actually called Machete order



Comment of layout: There was some space left I needed to fill. I choose the Star Wars beer our previous Hopo-Senator loved (read the mv summary of the last issue).

Comment of Boardmember: NOT AGAIN, DIDN'T I BAN THIS?



**SOMETIMES A LAYOUTER HAS TO SEEK A DARKER PATH OF FILLING MATERIAL FOR THE VISIONEN. THE FORCE DEMANDS A BALANCE OF A TOTAL PAGE NUMBER DEVISABLE BY FOUR. HENCE, MOST OF IT IS FROM THE INTERNET. SUE ME!**

# **STAR WARS BADLY EXPLAINED**

**JOHAN STETTLER**

**MY FAVOURITE CHARACTER IS MR SPOCK**

A woman's only child gets kidnapped by a cult, because her employer loses to a cheating space wizard in a gamble.

Monk investigates a private military company while his junior partner takes a politician on a romantic holiday, only to complain about sand.

Dude misses out on promotion due to anger management issues, commits domestic violence upon his pregnant girlfriend, before getting roasted by his colleague.

Uneducated farm boy meets a religious fanatic who convinces him to join a terrorist organization

Farmer gets trained by a Swamp-Goblin so he can deal with his daddy-issues.

A group of friends recruits a tribe of savage teddy bears to destroy a government installation.

Late-Goth-Teen with granddaddy issues and years of training gets his ass handed over by a noobie with 5 minutes of experience

Rescue mission leads to nothing and death.

Identity theft is not a joke, Ray!





**DID YOU EVER WANT TO VISIT A LAN PARTY BUT INSTEAD OF BEING A HARDCORE GAMER, YOU PREFER TO ENJOY CHILL GAMES? OR DO YOU LIKE COMPETITIVE GAMES? MAYBE, YOU ONLY HAVE A LAPTOP OR NO POSSIBILITY TO BRING YOUR DESKTOP PC TO ETH? ALL OF THIS DOESN'T MATTER! JUST BRING THE SETUP WHICH WORKS FOR YOU. EVERYONE IS WELCOME!**

# **BJÖRN GOES POLYLAN**

**JESSY**

**A PASSIONATE GAMER NOT STUDYING AT ETH  
OR SOMETHING WITH IT AT ALL**

In November, GECO offered another weekend full of gaming, caffeine, and sleep deprivation. The so called PolyLAN happens twice a year: The smaller, more intimate version in the autumn semester, and the big PolyLAN over Easter.

At PolyLAN you can compete in fun tournaments or just casually play something with your friends and/or other participants you will meet there. For all those who want to socialize, there is a Social Gaming area where couch gaming stations are set up – a small insight into the event series ‘Social Gaming Events’, which usually takes place biweekly during the semester.

Even our dear Björn decided to visit this autumn PolyLAN at StuZ and played some games himself. Our little polar bear spread a lot of joy in the row where he was sitting while playing video games.

The PolyLAN is perfect for meeting similarly minded people who enjoy video games as much as you do. The next edition will take place over Easter from April 7th to 10th. So, save the date, gather some friends, and sign up for PolyLAN as soon as registration opens to get the best spot! And the best thing is:

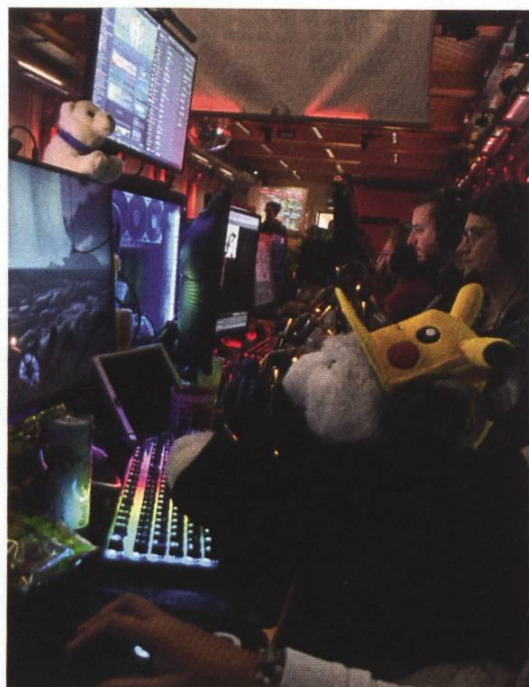
**VIS members get a discount for their ticket.**

All the important information can be found under [geco.ethz.ch](https://geco.ethz.ch) or on the GECommunity Discord server [geco.ethz.ch](https://geco.ethz.ch), where you receive updates about events or just to find new gaming buddies.



Fun Fact: Did you know that GECO's first PolyLAN back in 2017 was Star Wars themed?







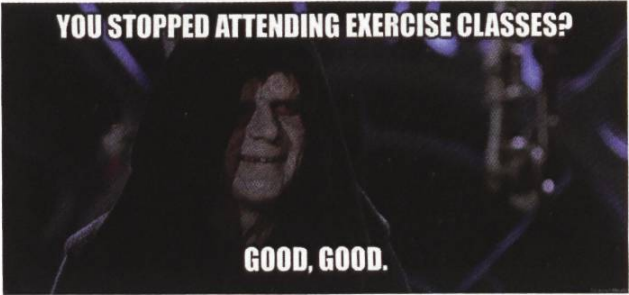
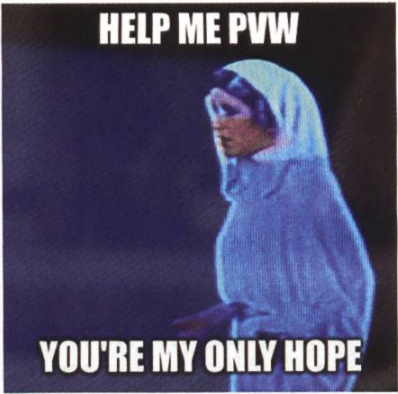
# FIGUGEGL IMPRESSIONS



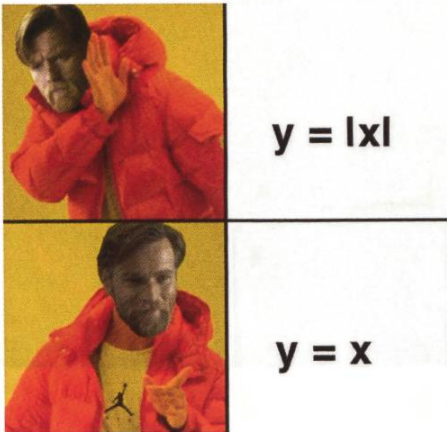
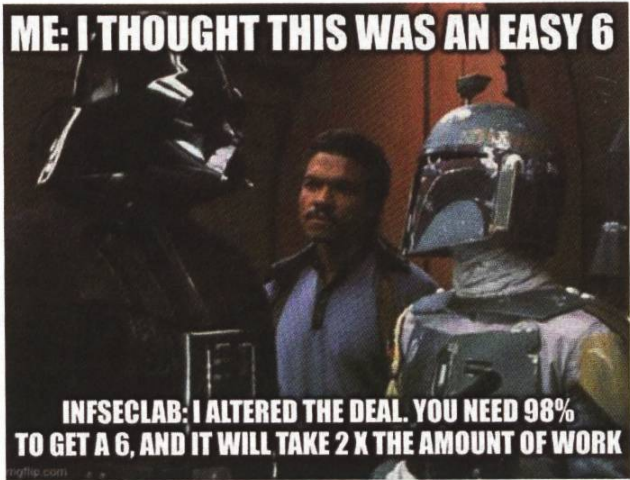
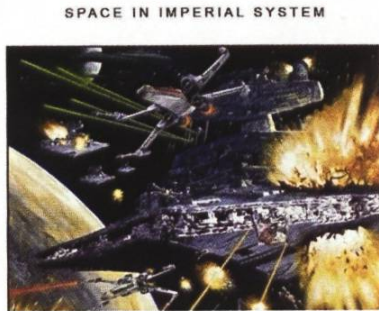
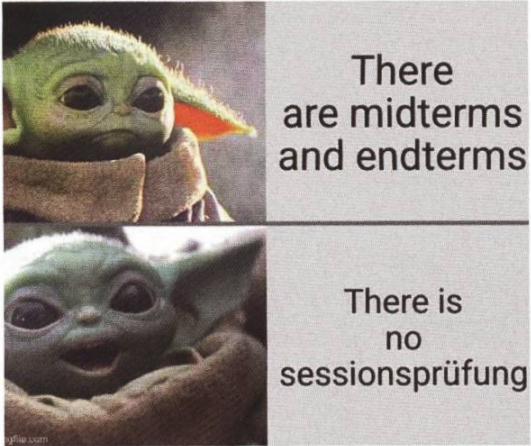








# RANDOM MEMES





# WORK HARD



## **BASTLI** HARDER


- ⚡ DIY electronics
- ⚡ Laptop repair
- ⚡ Electronics shop, large stock
- ⚡ 3D printing, laser-engraving, milling
- ⚡ Woodworking, arts and crafts
- ⚡ Awesome projects
- ⚡ Tools and expertise

Located in **CAB E 38**

Go to [bastli.ethz.ch](http://bastli.ethz.ch) for up-to-date opening hours.

Join the team! Perks include 24h access and free 3D-Printing\*  
We are looking for members from all study programs and all areas of interest

E-mail: [info@bastli.ethz.ch](mailto:info@bastli.ethz.ch)

 **Instagram:** @bastli.ethz



\*within limits



# THE SITH CODEX OF ETH

A student is here at ETH for the sake of a good degree for a well paid job.

A student only visits the classes without recordings in order to schedule their life more efficient.

A student often needs to drop certain projects, taking also a 1 into account, as long as passing the course is possible.

A student can never solve all projects, because they may be well time balanced within the course itself, but do not align with projects from other courses.

A student selects courses based on passing rate, workload, and cheesing possibilities.

A student never invests more than 2 days per week for a course. 10 KP is supposed to be a third of the semester, which leaves us at least one free day per week.

A student never copies homework from pears. But exchanging ideas is important, especially with the students who took the course last year, to solve the homework faster.

A student prepares for an exam by solely practising old exams.

A student keeps a somewhat healthy work-life balance, by sleeping in and partying with friends.

A student does not need to worry about cleaning the coffee machine, because we use the coffee credits for beer.

A student chooses how many semesters the degree will take. You can do some semesters with 18 KP with part-time work. Some need money or the experience.

A student in need will seek help in the oVIS for the dirty tricks and easy courses.

A student can be found around 5 am at the university due to an all-nighter for a project or due to a party.

A student joins the VISIONEN and writes about problems. Maybe the lecturers will read it.