



VISIONEN

visionen.vis.ethz.ch

Oktober 2020



Alles neu

```

public Applicant findBestMatchForBsi() {
    NeuralNetworkChromosome neuralNetwork = generateNeuralNetwork(DataSets.getTrainSet(),
        DataSets.getTestSet()).getChromosome();
    DataSet scoredApplicants = neuralNetwork.execute(DataSets.getPossibleApplicants());
    return scoredApplicants.getHighestScore();
}

```

1 Scan



Brains gesucht!

5 Be part of BSI

2 Use your brain

Mitmachen und gewinnen

4 Win Raspberry Pi

bsi-software.com/jobs

3 Train the neural network



ETH zürich
Department of Computer Science



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VIS con
DIGITAL

5. - 10. October 2020
ETH HG & At Home



viscon.ethz.ch

Editorial

Liebe Leserinnen und Leser

Ich richte hier in meinem letzten Editorial noch einmal das Wort an euch. Ab der nächsten Ausgabe wird mein Nachfolger die Zeitschrift übernehmen und sich mit seinem ganz eigenen Stil auszeichnen. Ich hatte eine aufregende Zeit in der VISIONEN Redaktion und durfte in letzter Zeit unter anderem den Umstieg zur Homeoffice Redaktion leiten. Inzwischen haben wir uns alle arrangiert, dennoch hoffe ich, dass mein Nachfolger irgendwann wieder traditionelle Sitzungen abhalten kann, bei denen man sich gemeinsam austauscht.

Ich wünsche euch nun viel Spaß mit dieser Ausgabe und viel Erfolg im neuen Semester!

A handwritten signature in black ink that reads "Sarah Kamp". The script is cursive and fluid, with the first letters of "Sarah" and "Kamp" being capitalized and prominent.

Sarah Kamp

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Become Part of the Story.



Im Technical Sales gefällt mir besonders die internationale Zusammenarbeit mit unseren Kunden und Niederlassungen.

Daniel Heid, Key Account Manager Mobile & Consumer Electronics

Wollen Sie in neuen Dimensionen denken und Maßstäbe mit höchster technischer Intelligenz setzen? Dann sind Sie hier richtig. Bei Sensirion erbringen innovative Persönlichkeiten Spitzenleistungen. Wir denken ebenso quer wie fundiert, überschreiten Grenzen und antizipieren Bedürfnisse.

Mit Expertise, Leidenschaft und aus Überzeugung. Gemeinsam arbeiten wir an den Technologien von morgen, treiben neue Entwicklungen voran und bewirken damit nachhaltige Veränderungen.

Schreiben Sie Ihre eigenen Kapitel der Sensirion Erfolgsgeschichte.

Präsikolumne

JONATHAN CHEN – WÜNSCHT ALLEN EIN ERFOLGREICHES SEMESTER

Werte VISler, werte VISIONäre.

Mittlerweile hat das Semester schon wieder begonnen. Ich hoffe, ihr konntet alle eure Ferien geniessen, euch gut von diesem anstrengenden Semester erholen und seid mittlerweile wieder gut ins neue Semester gestartet. Dieses spezielle akademische Jahr wird die höhersemestrigen Studierenden unter uns weiterhin auf die coronabedingte Belastungsprobe stellen. Für unsere Erstis, die neu an die ETH gekommen sind, wird es jedoch zu einem wirklichen Härtetest: Sie müssen sich nicht nur in eine neue, ungewohnte Umgebung einleben und dabei versuchen die Basisprüfungen zu bestehen, sondern all dies unter aussergewöhnlichen Bedingungen und einer unüblichen ETH-Infrastruktur. Deshalb wünsche ich allen Erstis einen guten Start an der ETH und viel Erfolg im Studium. Auch möchte ich euch alle, speziell die Erstis, noch einmal auf unsere Mittagspräsenz im oVIS (CAB E31) aufmerksam machen: Wir unterstützen und beraten euch gerne! Wir sind für euch da, kommt einfach ungeniert bei uns vorbei. Vielleicht fragen sich manche von euch, wie es mit dem VIS im neuen Semester aussieht. Aufgrund der fehlenden Planungssicherheit und der zusätzlich anfallenden Auflagen und Schutzkonzepten ist es leider immer noch äusserst schwierig, grössere Events zu planen. Neben den Online-Events, die wir schon letz-

tes Semester durchgeführt haben, bemühen wir uns deshalb – im Rahmen des Möglichen – nun wieder kleinere physische Events durchzuführen. Zu diesem Zeitpunkt stehen eine Handvoll Firmenexkursionen in den Startlöchern, grössere Events sind aber weiterhin in Abklärung. Wir sind jedoch sehr glücklich darüber, dass wir zumindest den Aufenthaltsraum wiedereröffnen konnten, damit ihr dort euren wohlverdienten Kaffee beziehen könnt. Schweren Herzens werde ich dieses Semester als Präsident des VIS abtreten und den Vorstand nach 3 Semestern verlassen. Ich durfte mit euch zusammen eine wunderbare Zeit erleben und möchte mich für die grossartige Unterstützung und Zusammenarbeit bedanken. Natürlich möchte ich an dieser Stelle auch dem nachfolgenden Präsidium alles Gute in seiner Amtszeit wünschen. Ich wünsche euch allen ein erfolgreiches Semester!

Es war mir eine Ehre.

Jonathan



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PDF Tools AG bietet Studenten (ETH, Uni) mit der Fachrichtung Elektrotechnik oder Informatik die Gelegenheit ein Praktikum „mittendrin“ zu absolvieren.

Pen & Paper Role Play Game, a short manual

JOHAN STETTLER – GAME MASTER IN TRAINEE

Whether you are curious about how to play a PP-RPG Game (games like Dungeons and Dragons or Pathfinder), wanted to experience one yourself without the trouble of reading 500 pages of rules or you want to introduce your friends to this genre, then look no further. During the lockdown of 2020, a lot of people suddenly became interested in the arts of Pen and Paper Games, because there was nothing much else to do. In the need of a rulebook that is suited for shorter sessions, beginner-friendly and adaptive to any setting, because of course everybody wanted to play a different story, I made a discovery, that I want to share with you. I am leaving out some details to keep the article short and readable. If you need more information, then use the internet.

First, the basics of an PP-RPG, for those unfamiliar with the concept. We have a group of people, where one is the Game Master or Dungeon Master. He is narrating a fictional story. The others, the players, are characters within said story. They take on a role, like an actor, which covers the Role Play part. The GM describes the scene at hand, everything the players can see, hear, smell, feel or taste. The players can then act at their own script, as they like. Of course, every action brings its fair share of reactions with it, i.e. everything a player does will have consequences. To make it an actual Game, there is usually a plot with a certain goal to reach, which the players can follow. The Pen and Paper is for

making notes and for bookkeeping of the character numbers. Similar to SIMS or other popular games, your character has certain skills and attributes, which are associated with a certain value. These can be good or bad attributes. The outcome of an action from a player is mostly determined by these numbers and a die roll. The better your attributes are, the higher is the chance of success. You want to punch someone? Roll for strength. You want to cook an omelette? Roll for cooking. Or you want to impress a lady? Roll for charm. There is an attribute or skill for any situation. The GM will decide what happens, based on the die rolls.

What do you need for playing? A motivated GM, 2 to 6 friends or something alike, a setting or theme about where the story should take place and what is it about (Western, Pirates, Space, Fantasy), a random number generator, preferably dice, pen and paper. The GM has the homework to create a story and the players have to create characters they like to play. Make notes of your character, also during the game.

No goes for characters are:

- Flawlessness
- Overpowered
- Edgy lone wolf
- Being too focussed on themselves over the story at hand

Now comes the difficult part, the rules. I found those rules online on howtobeahero.de¹, written by a dude² from Rocked Beans TV³. I can



only recommend watching their Pen & Paper adventures, especially the Morriton Manor series. These are unfortunately in German. I rally like these rules, as they are very simple, beginner-friendly and can be applied to any setting. The stories are much shorter under these rules, which is a huge plus for groups that only want to play for 1 to 3 sessions instead of several months.

You have 400 skill points each (calculated for 3 or 4 Players) and you have to invent your own skills but according to your character description. Each skill has to be assigned to one of the following categories: Action, for skills involving physique or dexterity. Examples are climbing, swimming, shooting, fighting, sneaking, stealing, etc. Knowledge, for skills involving knowledge (duh). Examples are botany, music instruments, medicine, cooking, engineering, foreign languages, etc. Social, for skills for human interactions. Examples are bargaining, flirting, deceiving, lying, manipulating, etc.

There can be overlaps. It can also be the case that in one setting, one has to have the skill to be able to do it, and in other settings, it is not necessary. For example reading can be seen as given in a modern setting, but should be a specific skill in a medieval story. Your GM decides where which skill finally belongs and if it is usable or too powerful. You assign each skill as much points as you like, but it should reflect your character. You cannot be a Surgeon, without skill points in medicine. 1 skill point is 1%, i.e. if you have a skill of 50 points, you have a 50% chance of a successful action using this skill. All points within one category have to be summed up and divided by 10 (rounded to the

nearest integer). This will be your base value and this one is added to all skills within the same category. Note that 99% is the maximum as rolling a 100 is always a failure.

Characters tend to have 3 to 4 good skills (60 points or higher) and some few less good. But that is okay. Use your imagination to solve all your problems with that one skill. I managed one whole campaign with only using my 90 dancing skill, even the boss fight was a cakewalk. The GM decides whether you may use a skill or not, you just have to convince him/her. If you do not have the skill, your GM can decide, if you can use your base value for rolling or not. For example basic knowledge in orientation for travelling in a city is understandable or a bandage for a small injury, but not if you want to perform an operation on a wounded soldier.

All the rules are a bit vague, but that makes it easy and fast and you should not overthink it too much. Now you are ready for the game! Have fun! For more details, you may talk to me about that, but be warned I can talk for hours! Or go online.



Fussnoten

- [1] <https://howtobeahero.de/index.php?title=Hauptseite>
- [2] (Hauke Gerdes) https://bohnen.wiki/index.php/Hauke_Gerdes
- [3] <https://rocketbeans.tv/>

EESTEC – can you eat that?

BENJAMIN AND HETTE STADLER – «STADLER EESTEC MINISTRY OF PROPAGANDA»

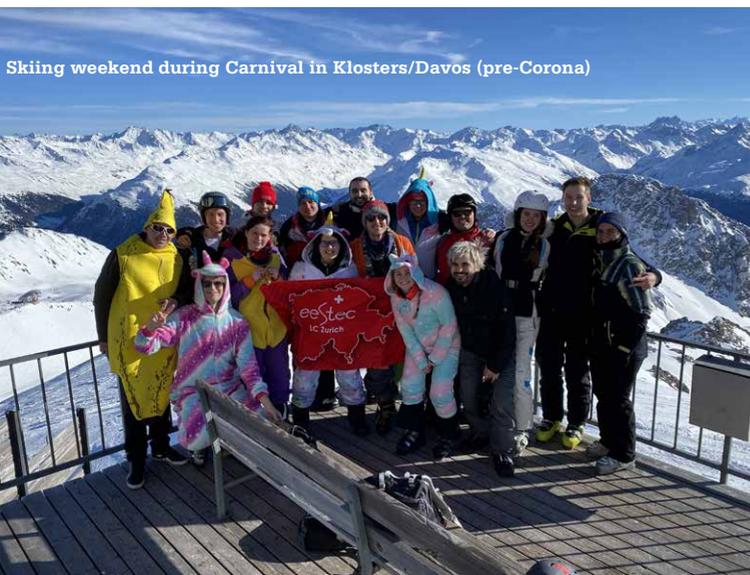
Does linking your Studies with travels, networking and self-improvement sound like a dream to you? Exploring European cities, getting to know different cultures and networking with people from all over Europe all at the same time? And the best part: It is fun and cheap! Well... if you are daydreaming about all this above (and I am sure you are), then you should continue reading about this association that fulfills students' dreams (and yours soon too).

EESTEC is the Electrical Engineering Students' European assoCiation and is open to all computer science, electrical and mechanical engineering students in Europe. Our aim is to spread and strengthen a network of students across Europe to exchange culture, academic knowledge and laughter with each other. The events that make this happen are always organised by one of the 50 international branches and have either a cultural (as in Fest- & Kulturkommission) or an academic focus.

Cultural events can last from three to seven days. They're focused on making friends and introducing you to the culture and city you are staying in. The highlights, however, are the academic events, a.k.a. workshops: For a week, during the day, you work on one topic/project with 10-16 other students from across Europe, and afterwards you are still able to enjoy some cultural activities. So, do you want to get more familiar with Industry 4.0 in the beautiful city of Madrid, expand your knowledge of web

development in the mind-blowing city of Istanbul, or improve your leadership skills in the wonderful city of Krakow? And while you gain a lot of knowledge and friendships, you only have to pay for travel costs!

If this sounds perfect to you, you can always check out eestec.net/events to see upcoming international and Zurich events. And in case one of them in-



Skiing weekend during Carnival in Klosters/Davos (pre-Corona)

All aboard the hype train!



Saturday, 10th October 2020, 5 pm

Talk @VIScon Digital by Ranil Wijeyratne

Senior Software Engineer, Ergon Informatik AG



Register now!

Staying up to date is a big challenge in our industry. New and exciting technologies and paradigms often emerge. Each one is supposedly more disruptive and groundbreaking than the other. How can we stay ahead and what does it mean to stay ahead anyway? Is new always better? Who are we doing this for? What are we trying to improve?

Tune in: bit.ly/ergon.viscon20



ergon smart people – smart software®

International and Zurich students at a Linux workshop (so happy, because the picture was taken before they attempted to install Arch)



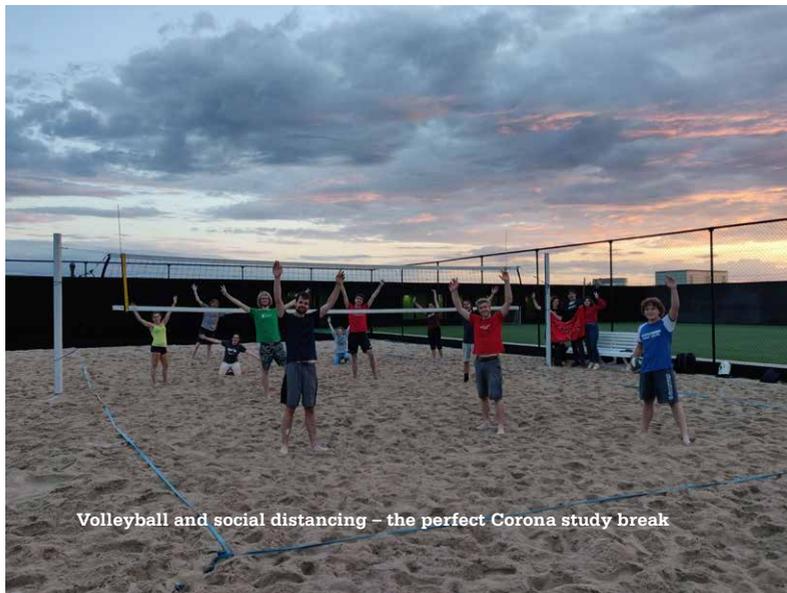
terests you a lot, feel free to contact us (E-Mail: contact@eestec.ethz.ch). However, due to Corona, there will probably not be any events soon.

Even if travelling is not your thing, you are always welcome to help organise these events in Zurich and give international students a perfect Swiss experience. Once or twice a year, students from across Europe also come to our workshops to, for example, improve their Linux knowledge or program Arduinos to create a weather box. To make their stay in Switzerland even more memorable, the weekend after the workshop, we

All in all, LC Zurich made the best of these unfortunate times. As you can see, we haven't run out of motivation or ideas, and of course, we are always happy to see new helpful and interested faces!

usually stay in a mountain hut and teach our guests how to yodel and enjoy life like real Swiss people do.

Of course, your first question will be: But there's this virus called Corona, so why are you telling me about traveling through Europe when we should just be staying at home?



Volleyball and social distancing – the perfect Corona study break



Well... I guess you are right, but I am sure this virus will be gone eventually and we can start travelling again - and don't you want to be part of it then? And even under a pandemic, we want something other than discrete mathematics in our life.

That is why even with Corona, we didn't stop organising events: First of all, we created a Discord channel, called *Corona Obstacle Neutralization Defensive Omnipresent Measures!*, to play online games and stay in contact with all our friends in Europe. We also ended up organising a soft skill training session, *Stay productive & motivated*, for everyone suffering from online learning and loss of focus. As the weather got warmer and Corona rules started loosening up in Switzerland, we began meeting at Chinawiese to play volleyball, go for a swim, and have BBQs.

Our summer highlight, the perfect study break, was a hiking weekend on Mount Rigi with people mainly from Zurich and Germany: Friday night was the *intercantonal night* with food and drink specialities from each canton of Switzerland, on Saturday we hiked around Rigi, enjoying the view of the Nebelhorn, and during

the night we pretended to be abroad at *Malle O'Originale Night*.

All in all, LC Zurich made the best of these unfortunate times. As you can see, we haven't run out of motivation or ideas, and of course, we are always happy to see new helpful and interested faces!

If you have read until this point, I guess you are interested enough to come by to one of our member meetings and meet us in person. The best way to find out where and when is to check out our website eestec.ch or our instagram account [eestec_lc_zurich](https://www.instagram.com/eestec_lc_zurich). On our website, you can read more about EESTEC, including reviews of past local & international events.

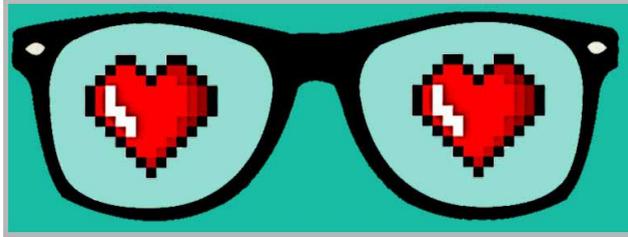
Due to Corona, we unfortunately have to see spontaneously what we will be able to organise this semester. However, we know for sure that our board is highly motivated and is always looking forward to welcoming new faces!

See you soon :)



Roses are #f00, Violets are #00f...

PASCAL STREBEL – MIGHT SHOW YOU HIS POKÉMON CARD COLLECTION IF YOU'RE LUCKY



The lame summer of 2020 caused all our flirting skills to become even a little rustier than they were before. Luckily, the lack of fun and parties probably also lowered the expectations of any person you would like to approach. What definitely got you a punch in the face some months ago might now be rewarded with a heart-warming smile.

The start of a new semester always yields the opportunity to catch up in love matters. Whether you are an excited Ersti that just re-watched American Pie and is ready for that frat life, a lonely second year student too shy to ask out that cute TA or a senior steps away from graduation but grandma permanently asks when that wedding will finally take place, the following top ten cringiest pickup lines might get the ball rolling.

So let's hope together that he or she looks just as attractive under that mask and go for it!

- Can I dereference my pointer in your secured area?
- Are you a router? Because I see you checking out my packet.

- My programming supports recursive function calls until your Boolean is set to true.
- Can I Squirtle on your Jigglypuffs?
- Why don't we go to my 127.0.0.1 and I'll give you sudo access.
- Want to see how many I/O operations I can perform?
- You still use Internet Explorer? You must like it nice and slow.
- Mind if I run a sniffer to see if your ports are open?
- Need me to unzip your files?
- You are hotter than the bottom of my laptop!

Bonus (if all else fails): 01110011 01100101
01101110 01100100 00100000 01101110
01110101 01100100 01100101 01110011

Important note: Everything above was tested thoroughly. Nobody got hurt in the process. No guarantees can be given.



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Mastering Digital Potential



VIS con

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5. - 10. October 2020
ETH HG & At Home

A special VIScon for special circumstances.

Calling the first two VIScons a success would be somewhat of an understatement. We had engineers, researchers and business leaders from multiple universities, startups and even Tech Giants. In *'When Sh!t Hits the Fan'* Gregor Wegberg explained why a security consultant might throw his client's laptop at the wall, while Prof. Roscoe showed his research computer *Enzian*. Last year more people wanted to attend VIScon than we were allowed to let into the building. Some of them coming from as far as EPFL. To meet the demand we made a big effort for VIScon 2020 to be held in ETH's main building. The good news: we got permission to move to the main building, the bad news: it's 2020. By the end of spring, it was clear, a VIScon 2020, as we planned could not take place this year. Within two weeks VIScon Digital was born. So how did we reimagine an event that lives from interactions to a time where there should be little to no physical contact? By doubling down on other important aspects of VIScon like learning and getting inspired - no matter if people join us at ETH or online.

Instead of a 42h hacking competition, Hackweek will be more like a weeklong FridayHack, where you can work on a problem over a whole week. Instead of running from talk to talk, at the Symposium you get something every day from Wednesday until Saturday. Starting with the opening speech by Google Tech Lead Manager Ekaterina Kamenskaya on *'Meaningful relationships and a sense of purpose in a time of crisis'*. No matter if you

want to know what digital twins are or how ETH Prof. Kenny Paterson helped to solve the privacy challenges to build the SwissCovid App, in our computer science track you can learn that and much much more. With our diverse interdisciplinary talks, you get to know ethical challenges like the ones Prof. Elliott Ash is facing while building a robot judge or listen to Katja Dörlemann explaining why in a security context RTFM (read the f***ing manual) is bad advice. In the entrepreneurship track, you can learn from ETH students how they turned their GameLab project into a startup. Besides, we introduce the Hacktrack! Haven't we all been in that Zoom call, where someone wasn't muted? Leonardo - from the VIS CTF Team - shows us how he reverse-engineered Zoom to get individual peoples' audio recordings. Also at VIScon Digital, this is just the tip of the iceberg. We have multiple workshops and even an escape room, where your computer skills will come in handy.



VIScon Digital is meant to be experienced at ETH or online. You might watch everything from home or register to come on-site every day. You might come only on Friday or only for the escape room and watch the rest at home - do whatever you like! Meet with your friends and watch a talk together, you will even receive something to drink if you order the free VIScon Welcome Box! Online you can also join discussions and ask questions that will be forward directly to the speakers. You will get the links to the live streams if you sign up on our website (link bellow). Now check out our program on the following pages and get excited for VIScon Digital. We hope to see you soon online or on-site!



There is also this interactive schedule on frab. Get detailed information and add events directly to your calendar.

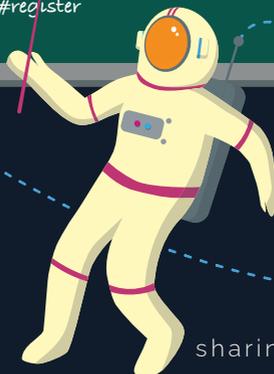
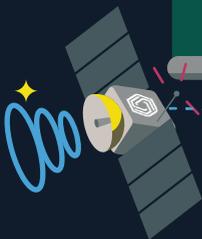
u.ethz.ch/qVzhy



Sign-up now to...

- stay up to date
- get links to join talks online
- get links to register for on-site events
- get the link to take part at Hackweek

viscon.ethz.ch/#register



sharing distant knowledge

Talks

Wednesday the 7th of October

19:00

Hello World

Opening Keynote:

Meaningful relationships and sense of purpose in a time of crisis

Ekaterina Kamenskaya, Google

20:00

5G Security Evolution

Security challenges and solutions in 5G networks

Vadim Paryev, Swisscom

User vs. Security - or why "RTFM" is not a good advice

Katja Dörlemann, SWITCH

21:00

Thursday the 8th of October

19:00

How does Zoom Store Recordings?

Reverse Engineering C++ and Custom File Formats

Leonardo Galli, VIS

Building a Covid-19 Contact Tracing App for Switzerland - Privacy Challenges and How We Solved Them

Kenny Paterson, ETH

20:00

Can you fix the world with a startup?

Tales from crafting a business model around truly sustainable cloud computing

Christoph Buchli, Helio

Inside a robot's brain

Deep dive on how to make autonomous robots think

Dina Youakim & Renaud Dubé, Sevensesense

21:00

Friday the 9th of October

19:00

Digital Building Twins

Why is it so cold in here?

Maria Husmann, Siemens

Digital integrity of the human person, proposal for a new fundamental right.

Alexis Roussel, Nym Technology

20:00

Internet tracking, tracing, profiling ... and manipulation?

Is there a subtle form of manipulation as a result of tracking and profiling?

Robert Würzler

How can we improve our handling of technology's negative effects?

Without paying attention to the root causes of technology's negative effects...

James Heim

21:00

Beerpong with HoloLens 2

Using cutting edge Mixed-Reality tech to play Beerpong

Patrick Misteli, Microsoft

Lessons Learned from 127 IT-startups of ETH Alumni

Dos and Dents - based on the insights of all interviewed entrepreneurs

Willy Bischofberger

22:00

Saturday the 10th of October



Reinventing Access Control with IoT: A Cloud-based Innovation in an Incumbent Industry

Zühlke

How Machine Learning is making harbours safer

Christoph Bräunlich & Philip Heck, BSI

13:00

Unrailed! - Post Mortem
From Gamelab to Industry

Lukas Rahmann & Thomas Wolf

How to mine the planet

About accessing and visualizing OpenStreetMap open data and more
Stefan Keller, OST

14:00

Developing accessible Software
Why the current effort is not enough

Lina Witzel

No IT Security without Free Software
How openness contributes to security

Max Mehl, FSFE

15:00

Building a Robot Judge
Data Science for the Law

Elliott Ash, ETH

Debunking strategies regarding fake news on the Internet

Findings from communication science
Sabrina Heike Kessler, UZH

16:00

All aboard the hype train!
How to stay sane in an industry that is constantly trying to reinvent itself.

Ranil Wijeyratne, Ergon

The Meaning of Trust (worthiness) for Innovation

Lea Strohm & Scarlett Eisenhauser, ethx

17:00

The missing ML lecture before starting in the industry

Dominik Keusch & Daniel Yu, ipt

Whereto with AI

Exploring the frontier between AI and philosophy

Phil Janson, EPFL

18:00

Computer Science

Entrepreneurship

Interdisciplinary

Hacktrack

19:00

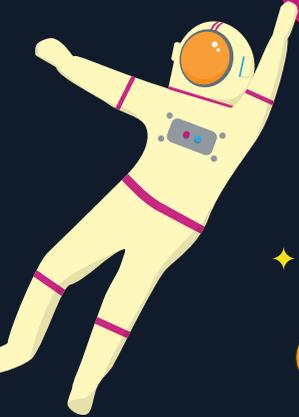
Tracks



sharing distant knowledge

Do you wonder how we get speakers from Microsoft and Google? Do you want to organize a Hackathon with free food for 100 participants or lighten up the ETH main building with many flashy LEDs? The VC2 is organizing the VIScon and for VIScon 2021 we again need many motivated volunteers.

Interested? Get in touch: vc2@vis.ethz.ch



Workshops & Escape Room

Friday the 9th of October

19:00

Attacking and Defending Web Applications

A lot has changed since the invention of the internet and the world wide web.

Web applications are no longer the static pages they once were, and this opens the doors to a plethora of attacks that could endanger a business or its users.

After an introduction with an overview of some common vulnerabilities in webapps, we intend to give participants some insight into practical attacks and vulnerabilities through a gamified experience.

Several small teams will attack each other, while trying to defend their own team website.

Leonardo Galli & Robin Jadoul, VIS

Hack the Hacker - the escape room

A click on a link in an email infects the computer system of your organization with ransomware. It's up to you and your team to rescue the data. The mission of your team is to find the code that revokes the encryption executed by the malicious software. Together with up to 5 people you have to search the hacker's den for hidden hints and clues.

Katja Dörlemann, SWITCH

22:00



Saturday the 10th of October

<p>In agile mission to Mars</p> <p><i>With agile methods to Mars! The task is both an introduction to agile methods and a Scrum simulation. Three groups per 60 minute session compete against each other.</i></p> <p><i>Each group consists of a Product Owner (ti&m coach), a developer team (programming), model builder team (design and construction) and surface designer team (construction of the ramp, terrain and garage). The 3 teams each build a Mars robot according to requirements from the backlog.</i></p> <p><i>Iteratively, the teams approach the demanding requirements: Example: driving curves, reversing, overcoming 45° inclines, avoiding obstacles, etc.</i></p> <p><i>Katharina Bornschein, ti&m</i></p>	<p>Just Another Day in Operations</p> <p><i>Suppose you're working for a software company and you're tasked with making sure your server application is running smoothly at all times. How do you do that? Join this workshop to find out!</i></p> <p><i>Filip Wieladek, Beekeeper</i></p>	<p>Hack the Hacker the escape room SWITCH</p>	<p>14:00</p> <p>15:00</p> <p>16:00</p>
<p>Towards a digital utopia</p> <p><i>In this workshop, participants are animated to engage in a macro-view of technology and political discourse. How do we steer techno-social progress away from dystopian futures towards a digital utopia?</i></p> <p><i>Francesca Giardina</i></p>		<p>Hack the Hacker the escape room SWITCH</p>	<p>17:00</p> <p>18:00</p> <p>19:00</p>

Tracks

Computer Science

Entrepreneurship

Interdisciplinary

Hacktrack

sharing distant knowledge



Visionen über Königssee

TOBIAS SCHEITHAUER – SUCHT EINEN WEG ZWISCHEN INSTAHYPE UND NATURERLEBNIS

Ich habe es gewagt. Inmitten der Corona-epidemie habe ich nach den Klausuren mit meiner Freundin Urlaub gemacht und bin gereist. Wir wollten wandern gehen an der deutschen Südgrenze. Unter anderem waren wir an den Instagram-Hotspots, dem Königssee (>210'000 Posts) und Schloss Neuschwanstein (>123'000 Posts). Epidemiebedingt waren dort allerdings bedeutend weniger Tourist:innen unterwegs, als sonst. An beiden Stellen konnten wir die Eigenheiten des «Instagram-Tourismus» beobachten. Bereits bei der Auswahl unserer Reiseziele hatten wir gesehen, dass am Königssee ein Ort existiert, an dem besonders viele Instagram-Posts entstehen. Der Königsbach fließt über einen natürlichen «Pool» in den See. Der wunderbare Ausblick sorgt für viele Likes und zieht entsprechend viele Influencer:innen an. Der Haken dabei: sowohl der Weg zu dem «Pool», als auch das Baden darin sind lebensgefährlich. Leider verhindert weder ein Schild noch ein bewusst platzierter Baum¹, dass immer noch viele Fotos dort geschossen werden. Nachdem wir zunächst zur Grünsteinhütte gewandert sind und die idyllische Natur bewundern konnten, haben wir nach dem Abstieg noch den «offiziellen» Aussichtspunkt auf den See besucht. Der Weg dorthin bietet ein Bild, das

unserem vorherigen Naturerlebnis diametral entgegensteht: touristische Souvenirläden und Fressbuden, die so auch in einem Freizeitpark stehen könnten. Hier haben wir in 20 Minuten so viele Menschen getroffen, wie vorher auf der vierstündigen Wanderung. Mehr Gesichter hat man allerdings nicht gesehen, da die allermeisten auf ihr Handy fixiert waren. Der Aussichtspunkt war dann zwar auch schön, allerdings waren wir verwundert, dort so viele Leute zu sehen, da wir auf der Wanderung mindestens genauso

schöne Ausblicke hatten.

Bei Schloss Neuschwanstein bot sich ein ähnliches Bild. Den Weg zum Schloss und zur Marienbrücke (der typische Postkartenblick)

gehen die meisten Menschen, doch den abzweigenden Wanderweg mit idyllischen Ausblicken auf den Alpsee hat man dann für sich allein. Das ist ja auch etwas Gutes. Wenn Ihr euch das nächste Mal also für einen Natururlaub entscheidet, lasst euch nicht von den Instagram-Hotspots abschrecken. Der «Overtourism» ist häufig auf eine kleine Fläche begrenzt. 

Der Haken dabei: sowohl der Weg zu dem «Pool», als auch das Baden darin sind lebensgefährlich.

[1] <https://www.br.de/nachrichten/bayern/nationalpark-berchtesgaden-will-infinity-pool-sperren,S5xfA1w>

Over heels

Head in love with data.

Titus von Köller, Data Engineer



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Pokémon – Competitive for Beginners

JOHAN STETTLER – POKÉMON GAMER SINCE 1998

Pokémon is one of the most known franchises in the world. There are some many games, mangas and toys in existence from this brand. Most people are playing the games more in a casual relaxing way or play the games as true collectors (gotta catch'em all). But there is also the competitive scene. Because I am conducting a Pokémon tournament soon in the VIS, I wanted to share a few concepts, that might be helpful for people new to this scene. There are a few concepts that are unique in competitive. You can no longer over level one Pokémon and beat any opponent with Tackle and 100 hyper potions (those were the days). Note, these tips are rather basic and are more laid out for the upcoming tournament, but they can be helpful in general. I expect the reader to be familiar with the concept of Typing (Water is super effective against Fire and Fire is resistant to Fairy, etc.)

All Pokémon do have stats. These stats are Hit Points, Attack, Special Attack, Defence, Special Defence and Speed. These numbers added together make the Base Stat for a Pokémon. Pokémon with a higher Base Stat are usually better than ones with a lower Base Stat. Pokémon are categorized into different Tiers. These Tiers are an indicator on how good a Pokémon is in the current generation and the meta game. This categorization is based on the Base Stat values, how often a Pokémon is used in a team and its win rate. Different communities do have different Tier-Lists but a very common standard

is the one set by the Smogon University[1]. In short, there is Uber, Over Used (OU) and others below (Under Used, Rarely Used, etc). Uber is for the Pokémon that are considerate to powerful and are banned for certain games. OU is the main category players choose their Pokémon from but anything from OU and below is fair game for any tournament.

Although your best bet is to choose a team from the OU Tier only, team composition is more important. A full OU team can lose against a mixture of Pokémon from OU and below, if the composition is just terrible. Typing is an important factor, but also the Stats. I usually go for a Team with 2 Special Attacker, 2 Physical Attacker, a high Defence Pokémon, and a High Special Defence Pokémon.

Attacks do have a Power Stat, a Type (Water, Fire, Grass, etc.) and a nature. The nature is either physical, special or status. The nature status is for all the non-damaging moves. Damage is being calculated by

$$\text{Damage} = \left(\left(\frac{2 \cdot \text{level}}{5} + 2 \right) \cdot \frac{\text{Power} \cdot A}{50 \cdot D} + 2 \right) \cdot \text{Modifier}$$

where A is either Attack Stat or Special Attack Stat of the attacking Pokémon and D is either Defence Stat or Special Def Stat of the defending Pokémon, depending on the nature of the attack. If the attack is of nature physical, then Attack Stat and Defence Stat are being used for the calculations. If the nature of the attack is special, then Special Attack and Special

Defence are being used for the calculation. The Modifier is influenced by typing, whether it is super effective (Water against Fire), normal (Water against Fighting) or not very effective (Bug against Steel), but also weather or terrain (Fire does more damage in sun and less in rain), critical hit or not and a small random factor between 0.85 and 1. You should just remember that just because your opponent resists your typing, e.g. Psychic Pokémon resisting Fighting, you can still take him out in one hit, if your attack is high and his defence is low. This can also go the other way, just because you are very effective, you might still need 3 hits to take the opponent down. This is why I go with the mentioned team composition, to evenly take and deal damage in physical and special.

Then we have STAB. STAB stands for same type attack bonus. If the type of the attack matches a type of the attacking Pokémon, then the Power is 1.5 times the given Power of the attack. Water-Types usually have Ice-attacks to counter Grass Pokémon. However, they do less damage with an Ice-attack than an Ice-Type Pokémon would do. This is very important to remember, because you might survive a super effective move, because it was not STAB from your opponent, but you might also need more than one hit with super effective moves, because it is not STAB. If all your Moves do neutral damage to the opponent, then you should always go for the STAB moves.

Since one can only have 4 Moves per Pokémon, it is good practice to choose them in such a way, that each Pokémon has one role. E.G. one is a fast physical attacker and the other has only utility moves and protection. Consider the following move choices:

- one STAB move per Type, for extra damage
- coverage moves to counter your weaknes-

ses (for Water use Ice attacks against Grass and Ground attacks against Electric)

- a priority move (Quick Attack, Bullet Punch, Extreme Speed, Aqua Jet, etc.), in order to hit first when they are low on health
- status moves for burn, sleep, paralysis or poison (burned Pokémon do half damage for physical moves and a paralysed Pokémon has reduced speed)
- Healing/Stalling moves (Recover, Wish, Healing Bell, Protect) in order to let the opponent faint by status effects or heal you
- Trap moves (Sticky Web, Spikes, Stealth Rock, etc.) for damage or lowering enemy stats
- Field moves (Trick Room, Rain Dance, Sunny Day, Light Screen, Tail Wind, etc.) to deal more damage, receive less damage or become faster
- Set up moves (Bulk Up, Sword Dance, Agility, Dragon Dance, Calm Mind, etc.) to rise your stats and deal more damage, receive less damage or become faster

Items and Abilities have now been skipped, because this is already enough to digest. I highly recommend googling Pokémon teams online[2]. They also come with items and abilities. Practise is however the most important thing and experience. If you want to play, I recommend the Pokémon Showdown application[3], which can be used over the browser. This site does not require any login or private data in order to be used. Good luck and have fun. 🙌

[1] <https://www.smogon.com/>

[2] <https://www.smogon.com/forums/forums/ss-ou-teams.545/>

[3] <https://pokemondshowdown.com/>

The Life of Cats

DR. ELEANOR ABERNATHY MD JD – CRAZY CAT LADY

PROF. DR. ANDRINE MONDSCHN – CAT APPRENTICE

Right now, you need power! A new semester has begun and the energy you have accumulated while enjoying your summer holidays will soon begin to fade. Thus we have mobilized our growing army of cute little kittens to energize your will to study in a moment of crisis! Enjoy and feel hugged, patted and cuddled :)



I only want to cuddle! Mraw :3

Hypno Cat





You awaiting the weekend



I'm a cat!

What a study group should look like



Are you pleased?



Ein besonderer Urlaub in Wien

SARAH KAMP – MUSSTE NICHT IN QUARANTÄNE

Ungefähr eine halbe Woche bevor ich diesen Artikel geschrieben habe, kam Wien auf die Quarantäneliste. Kurz davor bin ich aus meinem Urlaub zurückgekommen - aus einem Urlaub der anders war als sonst.

Wer in letzter Zeit mal nach Hotels geschaut hat stellt fest, dass sich in der Preisklasse in der man normalerweise lauter Jugendherbergen und günstige Hotels findet, jetzt auf einmal viel gehobener Hotels sind. Zusätzlich bot die Stadt Wien an, jede zweite Nacht für einen zu bezahlen, um den Tourismus etwas anzukurbeln. Da die Hotels sowieso so gut wie leer sind und ich daher in einem Hotel weniger Menschen begegne als bei mir zu Hause, beschloss ich dass so ein Urlaub durchaus vertretbar sei und buchte den Nachtzug nach Wien.

Das tolle am Nachtzug ist, dass man da sein eigenes Abteil buchen kann, was erstens bedeutet dass man das Ansteckungsrisiko drastisch gegen null senken kann und zweitens dass man maskenlos fahren darf, was bei einer 9h Fahrt nicht zu verachten ist.

Leider hat sich die Hinfahrt dann als nicht so toll herausgestellt. Wir hatten zwar unser

eigenes Abteil, aber da Ungarn etwa drei Tage zuvor die Grenzen dichtgemacht hatte und unser Liegewagen aus Budapest nach Zürich und dann wieder zurück fahren sollte, war besagter Wagen nie in Zürich angekommen. Daher bekamen wir einen tschechischen Ersatzwagen, nur mit Sitzplätzen ausgestattet, mit einem bestechenden sowjetischen Charme und durften

die Fahrt im Sitzen verbringen. Im Nachhinein haben wir die Fahrt dann immerhin erstattet bekommen.

Wir kamen dann also um 8 Uhr früh

in Wien an und wer schon mal da war, weiss, dass in Österreich die Uhren anders ticken. Es war gar nicht so einfach ein Frühstückslokal zu finden welches so früh schon auf hat (normale Frühstückszeiten sind meist 9 bis 16 Uhr). Bis wir dann ins Hotel einchecken durften, vertrieben wir uns die Zeit mit Sightseeing. Und ich konnte es kaum glauben - ich war schon oft in Wien und normalerweise wimmelt es nur so von Tou-

Zusätzlich bot die Stadt Wien an, jede zweite Nacht für einen zu bezahlen, um den Tourismus etwas anzukurbeln.



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risten, sodass ich tunlichst alle Orte meide die in Reiseführern aufgeführt sind. Im Stephansdom, in der Hofburg, im Schmetterlingshaus, überall waren zwar Touristen, jedoch in einem sehr angenehmen Mass. Diese Tatsache hat dazu geführt, dass ich sämtliche Touristen Hotspots abgeklappert habe und sehr viele neue Dinge entdecken konnte.

Ich habe zwei sehr aussergewöhnliche Museen angeschaut, die ich so noch nicht kannte. Auf dem Wiener Zentralfriedhof findet man das Bestattungsmuseum, da das Sterben in der Wiener

ich war schon oft in Wien und normalerweise wimmelt es nur so von Touristen, sodass ich tunlichst alle Orte meide die in Reiseführern aufgeführt sind.

Kultur eine sehr wichtige Stellung hat und sehr celebriert wird. Wer schon mal im Bestattungsmuseum ist sollte übrigens den Museumsshop besuchen, mit einigen sehr makaberen und lustigen Souvenirs, und ausserdem einen Spaziergang über den Zentralfriedhof selbst machen (eine wunderschöne Anlage auf der man wortwörtlich kilometerlang gehen kann).

Das zweite besondere Muesum war das Fälschermuseum, wo Kunstfälschungen ausgestellt werden. Dabei sind nicht die Fälschungen an sich das interessante (die sehen im Idealfall

ja genauso wie die Originale aus), sondern die Geschichten, die einem in diesen Muesum dazu erzählt werden. Dort habe ich herausgefunden, dass gute Kunstfälscher meist nur Bewährungsstrafen bekamen und hinterher (ganz legal) Millionen mit ihren Werken verdienen konnten. Ab und zu wurden schliesslich sogar die Fälscher gefälscht. Also ein sehr lohnendes Verbrechen. Leider reichen dafür meine kunstschaaffenden Fähigkeiten nicht aus.

Wenn man in Wien nicht gerade kuriose Museen anschaut, sollte man unbedingt essen gehen. Dabei sind die besten Mahlzeiten in dieser Reihenfolge: Frühstück, Nachmittagskaffee (und Kuchen), Abendessen. Es gibt so viele grossartige Frühstückslokale, dass man sich wünscht,

man könnte mehrmals am Tag frühstücken gehen. Eine kleine Abhilfe schafft da der Nachmittagskaffee, denn Wien hat auch richtig gute Kuchen und Torten. Dazu gehört natürlich eine Wiener Melange (wer das gar nicht kennt, sollte in Richtung Cappuccino denken). Hauptspeisen sind in Österreich eher fleischlastig (sofern man wirklich traditionell isst). Aber auch da kann ich für die weniger Fleisch-affinen wieder an das Dessert appellieren.

Es waren gemütliche Tage, an denen auch das Social Distancing gut geklappt hat. Übrigens war bei der Rückfahrt ein richtiger Liegewagen vor Ort, sodass ich mich kaum noch über die Hinfahrt aufrege ;)



The peculiar Adventures of Manfred und Erwin

GESCHRIEBEN VON ELEONORA VICKTORIA VAN DER GUERKLI

Die Geschichten von Manfred Lötzbue und Erwin Lisbeth Kummerli.

Teil 3: Manfred und Erwin – Has somebody seen those men?

Abstract: Manfred und Erwin? Die Sonne brennt stark. Die Backsteinmauer des alten Chemiegebäudes scheint, als könnte auch sie von einem Sonnenschutz Gebrauch machen. Irgendwo in der Nähe verrichtet ein Presslufthammer sein Werk mit einem ohrenbetäubenden Lärm. Man kann beobachten, wie Strassenbahnen in exakten Intervallen am Gebäude vorbeirasen. Alles geht seinem geregelten Ablauf nach und doch, und doch herrscht eine Spannung in der Luft. Etwas passiert. Wie die ohrenbetäubende Ruhe vor dem

Sturm. Quietschende Schritte im Gang! Zwei Menschen! Beide haben kein Gesicht. Sie haben eine Maske auf.¹ Was haben sie vor? Sie gehen die Treppe runter. Nie geht jemand die Treppe runter, ausser Mittwochs, nur hoch. Jetzt sind sie weg. Erneut erfüllt ein Presslufthammer mit seinem markerschütternden Lärm die Luft...



Referenzen

[1] Wieso liegt da Stroh?!

Who's that



だれだ？



Bildnachweise

- S. 11-13: © EESTEC
- S. 30-31: © Sarah Kamp
- S. 14: © Pascal Strebel

Aktuarum Abstrusum Abominatum

FRANZELPANZ – DIE GEDA#@#½-½%ÇÇÇÇ%Ç*""+*Ç%&/()*NKEN EINES AKTUARS

TOBI-WAN KENOBI – INSANUS PER PROCURATIOOOOOO#*S-|ç|-§FGDS°#@@@@NEM

Hallo Welt! Weinet nicht, frohlocket! Eine neue Episode! – Episode? Von was?! – Gute Frage!... – Die Antwort? – Gute Fragen sind Fragen, auf die man keine Antwort weiss. Aber zum guten Glück trifft diese Aussage nicht auf unseren heutigen Sponsor z... – Moment, seit wann hat diese Episode ein Spons... – Frisch, frech und völlig absurd! Biobrause präsentiert: Die neuen nihilistischen Gedanken unserer Aktuare:

Lieber Beistand

Dies ist ein Menetekel! Das Sturmtief "Dagmar" 1 nähert sich der oVIS-Coast. Anwohner des CelluloseAcetoButyrat werden gebeten sich auf den fewugassGAU (fermentiert, extrem, wahrscheinlich, unmöglich, grösser als super, super GAU) vorzubereiten und ihren proxima Migrois zu plündern. Jegliche Argumentverstärker sind permittiert. Sollten Sie keine Mistgabeln oder überdimensionale Streichhölzer liquid haben, keine Sorge, diese können auch direkt vor Ort gefunden werden. Es wird empfohlen sich mit esculenta eligit Materiam gefüllte metallene Hohlzylinder zuzulegen, da die äquatiscche Kataigida bis zum Tag des Johannes Baptist de La Salle dauern kann. Sollten sie mit einer Inundatio der Tinte, Orejas de Burro oder protokollkanibalistischen Eigentumstieren in Kontakt kommen, kontaktieren sie bitte ohne temporale Verzerrungen ihren nächstgelgenen Raphus Cucullatus.

Liebe Grüsse
Franzelpanz

Hach... Wie schön ist es doch sich wieder einmal an die schöne Zeit zurückzuerinnern, wo unser Hirn noch Matsch war. – Eine gute Zeit. – VIS Vorstand müsste man wieder sein! – Hört hört! – ... – Was hat uns jetzt eigentlich dieser Sponsor gebra... – Vielen Dank fürs mitlesen und freut euch auf die nächste Ausgabe :)



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

Who's that Digimon – Auflösung

Gatomon

Level Champion

Heiliges Tierdigimon

Typus Serum

Attacke Blitzpfote, Katzenauge

Nice to know: Gato ist spanisch und portugiesisch und bedeutet Katze. Gleichzeitig ist das griechische Wort für Katze gatos.



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AIRLOCK
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SWITCH

