

# SNEK

Social Network for Engineers and Knowledged

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21. February 2020

Höhere technische Bundeslehr- und Versuchsanstalt Villach

- 1 SNEK Motivation**
  - Was SNEK?
  - Wie SNEK?
  - Warum SNEK?
- 2 Projektmanagement**
  - Arbeitsstunden
  - Burndowncharts
- 3 Design**
  - Wireframes
  - Implementation
- 4 Security**
- 5 Entwicklung**
  - Git Utils
  - Intel
  - Backend



## **SNEK Motivation**

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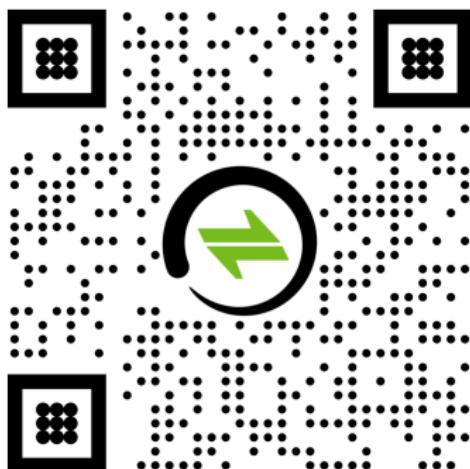
„Unser Ziel ist es eine Plattform zu schaffen, die Techniker dazu anregt ein Portfolio zu entwickeln.“ - Mission Statement

## Fragen:

- Was SNEK?
- Wie SNEK?
- Warum SNEK?

**Abb. 1:** Quelle: GitHub, 2016

[github.com/snek-at](https://github.com/snek-at)



**Abb. 2:**

Quelle:  
QRCode Monkey, Air Quality Monitoring  
Station, 2018

Python, Typescript, Microsoft .Net (C#), Javascript, Java, Go, CSS, SCSS, Jinja, PHP, Bash  
Python (Django, Flask, Graphene-Python, uWSGI), C#(WPF, ASP.NET Core), PHP(Laravel)  
MariaDB, PostgreSQL, MySQL

Vim, Visual Studio Code, Brackets, Visual Studio, Android Studio, git

Docker, Portainer, Nginx, Traefik, Kubernetes

Arch Linux, Redhat Linux, Centos Linux, Debian Linux, Windows 10, Windows Server

NMAP, BloodHound, SharpHound, Hashcat, John, SQLMap

Scrum, Waterfall, MS Project, MS Teams

**Abb. 3: Was soll SNEK können**

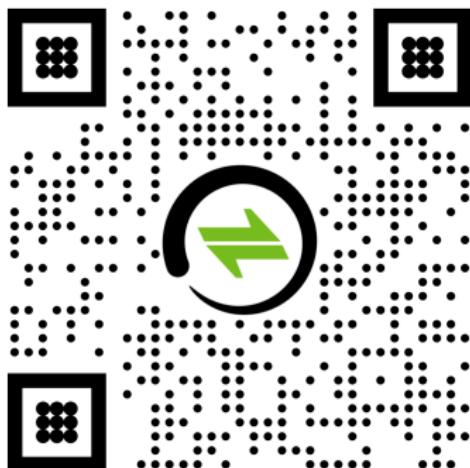
Quelle: Lebenslauf Kleber Florian

## Fragen:

- Was SNEK?
- Wie SNEK?
- Warum SNEK?

**Abb. 4:** Quelle: GitHub, 2016

[github.com/snek-at](https://github.com/snek-at)



**Abb. 5:**

Quelle:  
QRCode Monkey, Air Quality Monitoring  
Station, 2018



**Abb. 6: Ranglisten basierte Plattformen**

Quelle: [/LeagueOfLegends](#) [/HackTheBox](#) [/Linux](#) [/Reddit](#)

## Fragen:

- Was SNEK?
- Wie SNEK?
- Warum SNEK?

Abb. 7: Quelle: GitHub, 2016

[github.com/snek-at](https://github.com/snek-at)

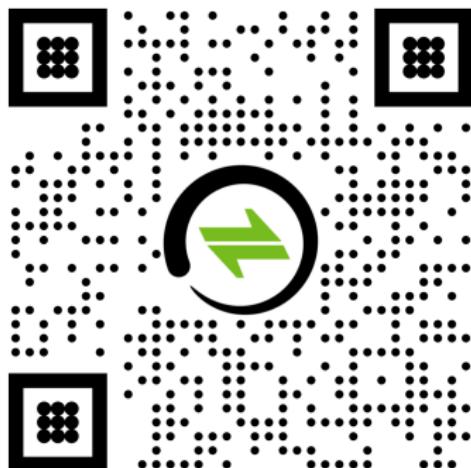


Abb. 8:

Quelle:  
QRCode Monkey, Air Quality Monitoring  
Station, 2018

## Techniker:

- Einfachere Bewerbungen
- Vergleich mit anderen
- Alle Bereiche

## Firmen:

- Übersicht über Mitarbeiter
- Einfacheres Recruiting
- Profilieren der Firma

# **Projektmanagement**

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## Ausschnitte:

- Arbeitsstunden
- Burndowncharts

Abb. 9: Quelle: GitHub, 2016

[github.com/snek-at](https://github.com/snek-at)

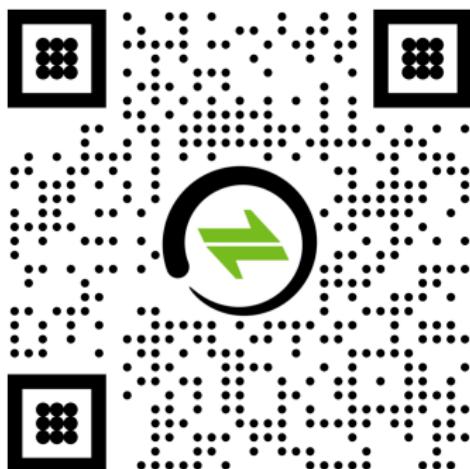


Abb. 10:

Quelle:  
QRCode Monkey, Air Quality Monitoring  
Station, 2018

## Schulische Arbeitsstunden

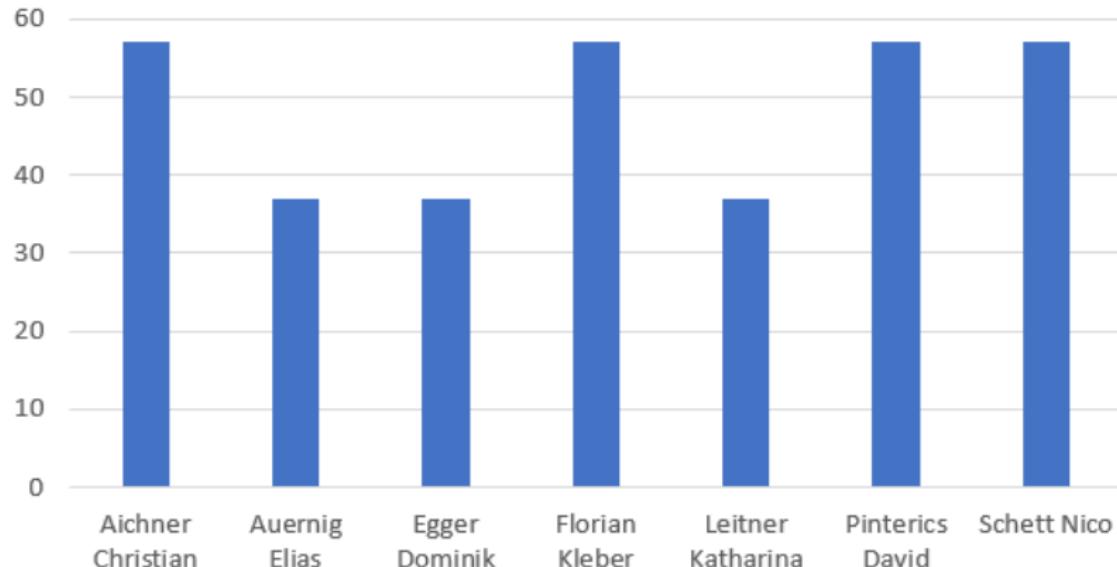


Abb. 11: **Arbeitsaufteilung**

Quelle: Pinterics David

## Ausschnitte:

- Arbeitsstunden
- Burndowncharts

Abb. 12: Quelle: GitHub, 2016

[github.com/snek-at](https://github.com/snek-at)

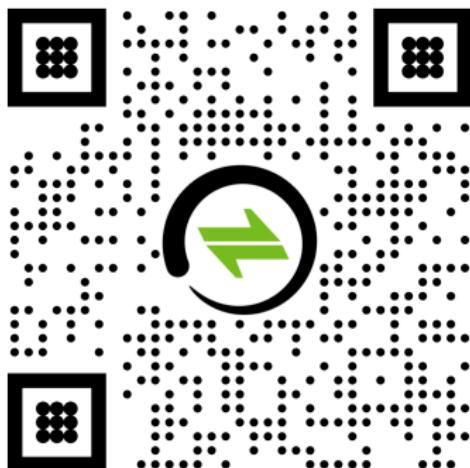


Abb. 13:

Quelle:  
QRCode Monkey, Air Quality Monitoring  
Station, 2018

# Burndowncharts



Sprint Start Date	27.09.2019	Day of the Sprint	Forecast	Actual
Sprint End Date	13.12.2019	0	234	250
Working Days	9	1	205	230
Team Size	8	2	176	200
Planned Work Hours	234	3	147	165
Actual Work Hours	250	4	118	130
		5	89	100
		6	60	60
		7	31	20
		8	0	0
		9	0	0

Sprint 1 - 3

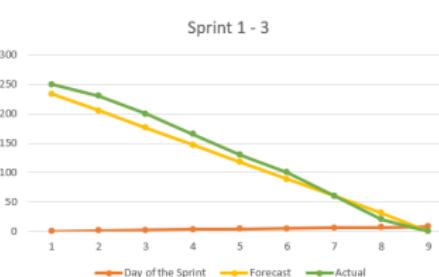


Abb. 14: Sprint 1-3 Resultate

Quelle: Pinterics David

# Burndowncharts

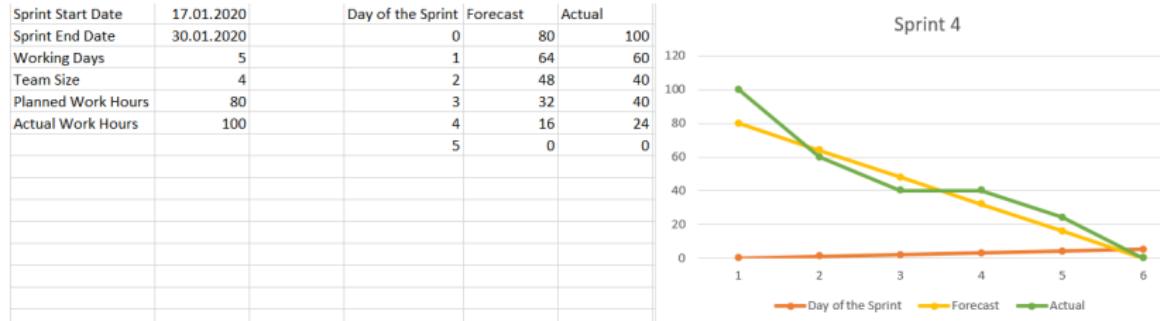


Abb. 15: Sprint 4 Resultate

Quelle: Pinterics David

# Design

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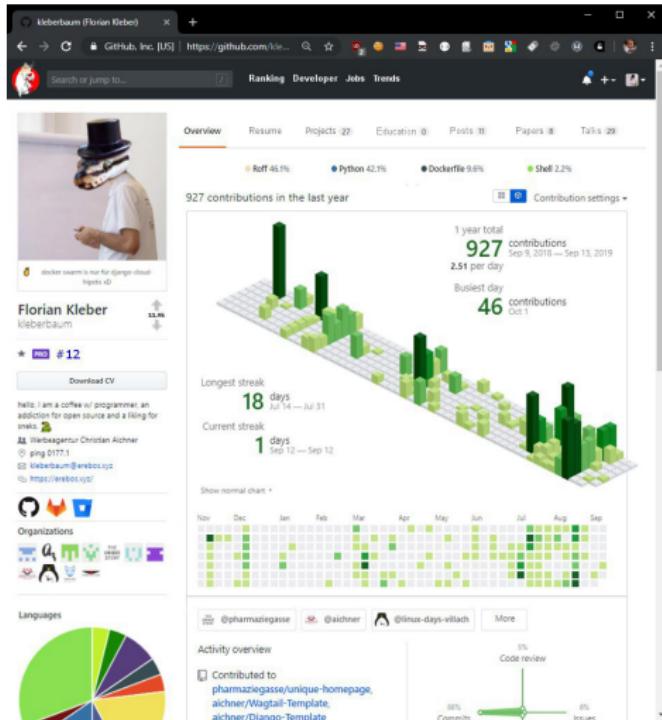


Abb. 16: SNEK Mockup  
Quelle: Florian Kleber



## Wireframes:

- Projects-Tab
- Talks-Tab
- Education-Tab

Abb. 17: Quelle: GitHub, 2016

[github.com/snek-at](https://github.com/snek-at)

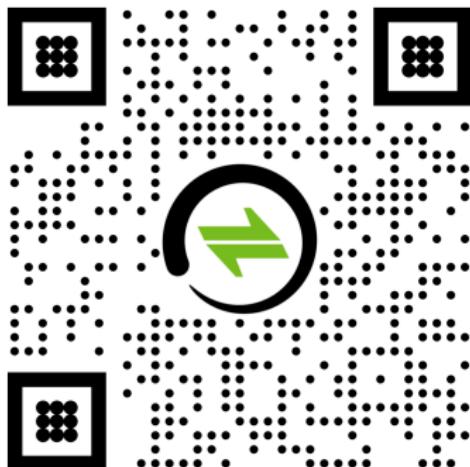
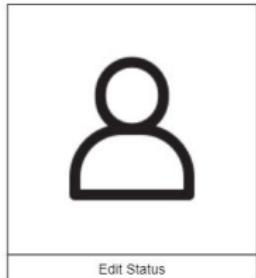


Abb. 18:

Quelle:  
QRCode Monkey, Air Quality Monitoring  
Station, 2018

# Projects-Tab



Firstname Lastname

Username

Edit profile

Organizations



Logos of organizations

The wireframe shows a search bar with a magnifying glass icon and the text "is open". Below it, a button labeled "New Project" is highlighted with a green border. A dropdown menu titled "Sort by" is open, listing options: Newest (checked), Oldest, Recently Updated, Last Recently Updated, and Name.

Sort by
Newest
Oldest
Recently Updated
Last Recently Updated
Name

Description page about project boards

Button Click on New Project

Abb. 19: Projects-Tab Wireframe

Quelle: Leitner Katharina



**Create a new project**

Coordinate, track, and update your work in one place, so projects stay transparent and on schedule.

**Project board name**

**Description (optional)**

**Visibility**

**Public**  
Anyone on the internet can see this project. You choose who can make changes.

**Private**  
You choose who can see and make changes to this project.

**Linked repositories**

Linked repositories: repository name

**Create Project**

**Abb. 20: Projects-Tab Wireframe**

Quelle: Leitner Katharina

# Projects-Tab



1 Open ✓ 0 Closed Sort ▾

Projectname	Description of the Project	More
Private	Project description	<ul style="list-style-type: none"><li>Edit</li><li>Close</li></ul>

Projectname  Description of the Project

Updated on Jan. 1

...

Edit

Close

Abb. 21: Projects-Tab Wireframe

Quelle: Leitner Katharina



## Wireframes:

- Projects-Tab
- Talks-Tab
- Education-Tab

Abb. 22: Quelle: GitHub, 2016

[github.com/snek-at](https://github.com/snek-at)

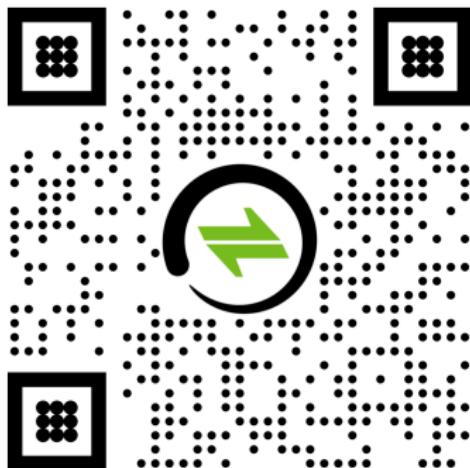


Abb. 23:

Quelle:  
QRCode Monkey, Air Quality Monitoring  
Station, 2018

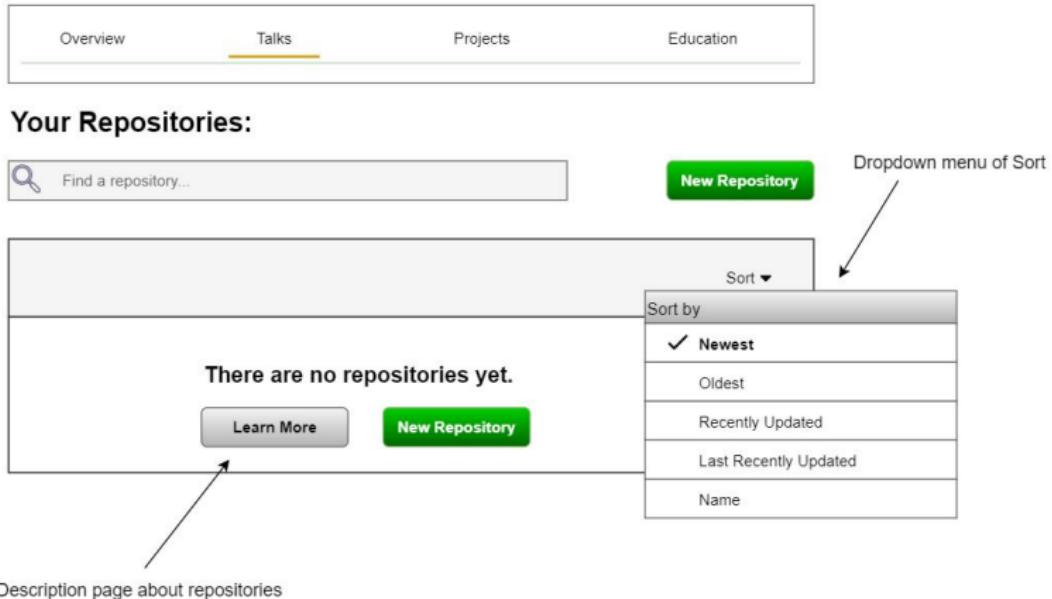


Abb. 24: Talks-Tab Wireframe  
Quelle: Leitner Katharina



### Create a new repository

A repository contains all the files for your project, including the revision history.

**Owner**  / **Repository name**

**Description (optional)**

**Public**  
Anyone can see this repository. You choose who can commit.

**Private**  
You choose who can see and commit to this repository.

**Create Repository**

**Abb. 25: Talks-Tab Wireframe**  
Quelle: Leitner Katharina



Sort ▾

**Repositoryname**

Description of the Repository

JavaScript 20 ⚡ 15 ! 2 ★ 5 Updated 10 days ago



**Abb. 26: Talks-Tab Wireframe**

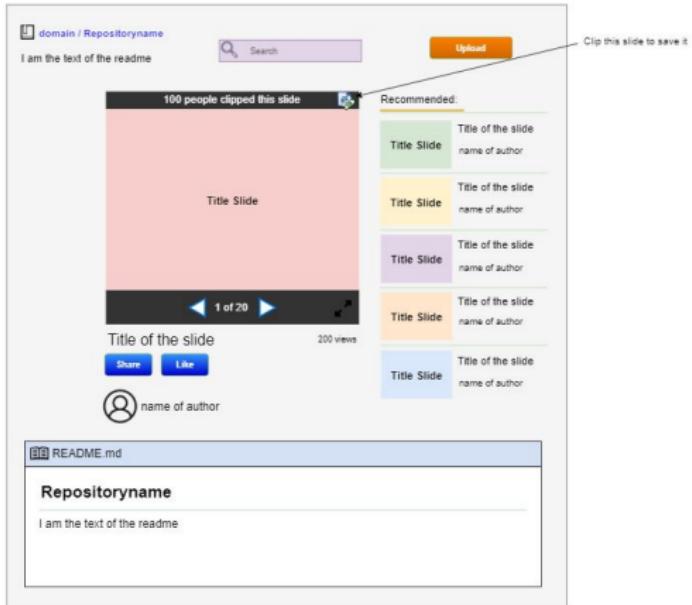
Quelle: Leitner Katharina



The wireframe illustrates the layout of the Talks-Tab application. At the top, there is a header section containing a domain input field ('domain / Repositoryname'), a search bar ('Search'), and an orange 'Upload' button. Below the header, the main content area features a title 'Discover. Share. Learn' and a subtitle 'Share what you know and love through presentations, infographics, documents and more.' The main content area is divided into three horizontal sections, each representing a 'Title Slide'. Each slide card includes placeholder text for the author's name and slide title, and a view count of '100.000 views' along with heart and share icons.

Slide 1 (Pink)	Slide 2 (Orange)	Slide 3 (Green)
Name of author	Name of author	Name of author
Title of the Slide	Title of the Slide	Title of the Slide
100.000 views	100.000 views	100.000 views

**Abb. 27: Talks-Tab Wireframe**  
Quelle: Leitner Katharina



**Abb. 28: Talks-Tab Wireframe**  
Quelle: Leitner Katharina



## Wireframes:

- Projects-Tab
- Talks-Tab
- Education-Tab

Abb. 29: Quelle: GitHub, 2016

[github.com/snek-at](https://github.com/snek-at)

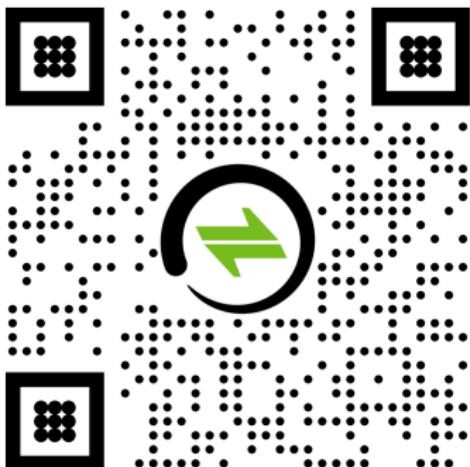


Abb. 30:

Quelle:  
QRCode Monkey, Air Quality Monitoring  
Station, 2018



The wireframe illustrates the layout of the Education-Tab. At the top, there is a navigation bar with tabs: Overview, Talks, Projects, and Education (which is underlined). Below the navigation bar, a search bar contains the placeholder "Find a file..." and an "Upload file from" button. A callout arrow points from the "Learn More" button to a descriptive text block. Another callout arrow points from the "Sort by" dropdown menu to its list of options. The main content area displays a message: "There are no files yet." A large callout arrow points from the "Sort by" menu to its list of options.

Overview      Talks      Projects      Education

Find a file...      Upload file from

Add work and education

Learn More

Upload file from

Sort by

Newest (checked)

Oldest

Recently Updated

Last Recently Updated

Name

There are no files yet.

Description page about education-files

Sort by

Newest

Oldest

Recently Updated

Last Recently Updated

Name

Abb. 31: Education-Tab Wireframe

Quelle: Leitner Katharina



Add work and education

---

**Work**

Company:

City/Place:

Description:

Period of time:

from:  Year ▾  Month ▾  Day ▾      till:  Year ▾  Month ▾  Day ▾

now      or

---

**Job**

Job:

If now is checked, this is greyed out

Abb. 32: Education-Tab Wireframe

Quelle: Leitner Katharina

# Education-Tab



---

**University**

University:

Period of time:

from:  Year  Month  Day

till:  Year  Month  Day

now or

Description:

Main focuses:

---

**Abb. 33: Education-Tab Wireframe**

Quelle: Leitner Katharina

**School**

School:

Period of time:  
from:  Year  Month  Day      till:  Year  Month  Day

now      or     

Description:

Public  
 Private

Abb. 34: Education-Tab Wireframe

Quelle: Leitner Katharina



Abb. 35: **Education-Tab Wireframe**

Quelle: Leitner Katharina



Work and education

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**Work**

Companyname  
City/Place  
Description  
from: year month day  
till: year month day or now

**Job**

Jobname

**University**

Universityname  
from: year month day  
till: year month day or now  
Description  
Main focus 1  
Main focus 2  
Main focus 3

**School**

Schoolname  
Description  
from: year month day  
till: year month day or now

Abb. 36: Education-Tab Wireframe

Quelle: Leitner Katharina

# Implementation



The screenshot shows the homepage of the SNEK website. At the top left is the SNEK logo with a green icon. A search bar is positioned next to it. At the top right, there is a navigation menu with links to Home, Ranking, Developer, Jobs, and Trends. Below the header, a large banner features the text "Built for developers." and "Open Source Social Network". It includes two buttons: "Donate" and "Our mission". To the right of the banner is a login form with a "Login to SNEK" button and an "or" link. Below the login form is a section titled "Choose your snek" asking "What is your main profession?". It lists "Software Engineer" with an icon of a person at a desk, and "Media Engineer" with an icon of two people working with plants. At the bottom of the page, there is a decorative green footer area containing three white icons: a person on a laptop, a bar chart, and a person jumping next to a trophy.

**Abb. 37: Implementation SNEK**  
Quelle: Aichner Christian

# Implementation

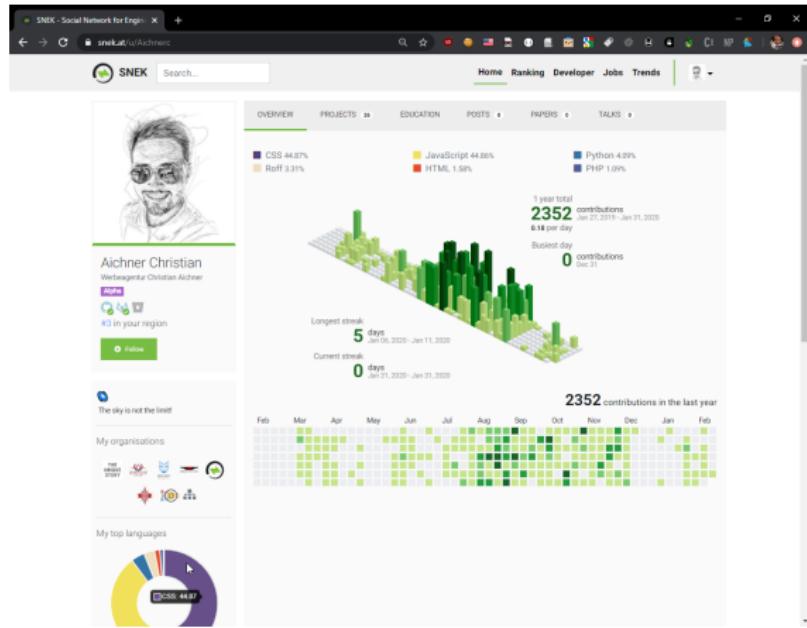


Abb. 38: Implementation SNEK  
Quelle: Aichner Christian

# Implementation



The screenshot shows a web browser window for the SNEK platform. The left sidebar displays a user profile for "Aichner Christian" with a portrait, bio, and social links. Below this are sections for "My organisations" and "My top languages" (represented by a donut chart). The main content area is titled "Repositories" and lists several projects:

Repository Name	Language	Owner	
unique-homepage	CSS	charm-webapp	JavaScript
Company-Homepage	JavaScript	blue-lupi-homepage	JavaScript
front	JavaScript	KISy-Webapp	CSS
React-MDB-Template	JavaScript	Holobook	CSS
Moody-Firebase	CSS	concept	JavaScript
Sonnenarm-Homepage	JavaScript	client-pharmaziegasse-cha...	JavaScript

**Abb. 39: Implementation SNEK**  
Quelle: Christian Aichner



**Abb. 40: Promocode**  
Quelle: Aichner Christian

# **Security**

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## Ideen:

- OAuth mit Server
- OAuth nur mit Client

Abb. 41: Quelle: GitHub, 2016

[github.com/snek-at](https://github.com/snek-at)

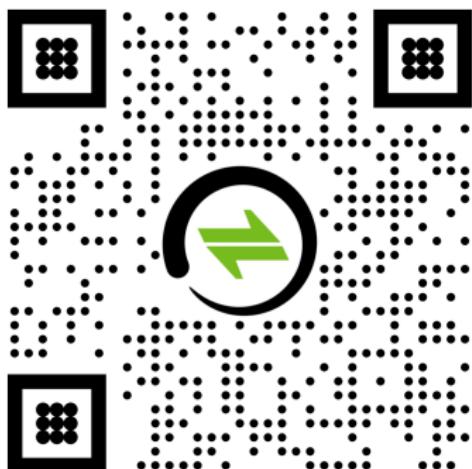


Abb. 42:

Quelle:  
QRCode Monkey, Air Quality Monitoring  
Station, 2018

## OAuth with Server

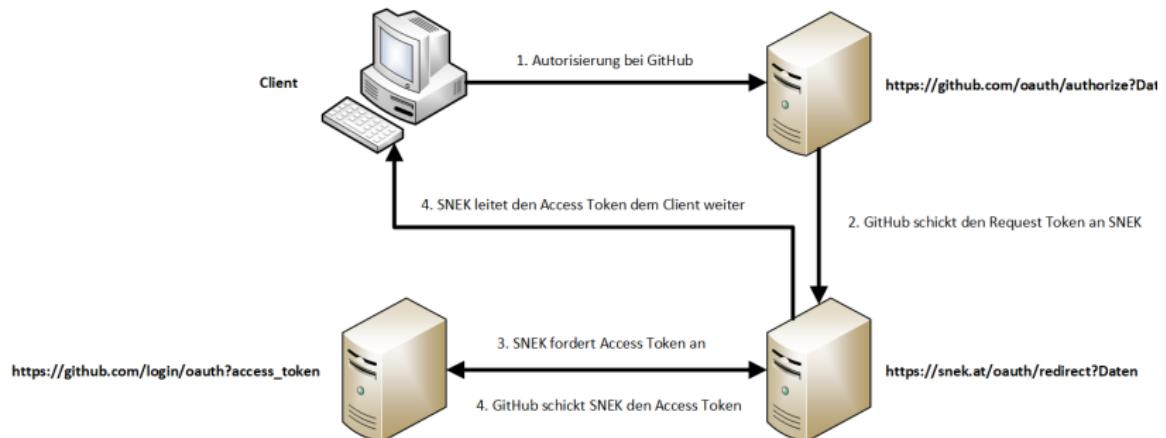


Abb. 43: OAuth mit Server

Quelle: Pinterics David

## Ideen:

- OAuth mit Server
- **OAuth nur mit Client**

Abb. 44: Quelle: GitHub, 2016

[github.com/snek-at](https://github.com/snek-at)

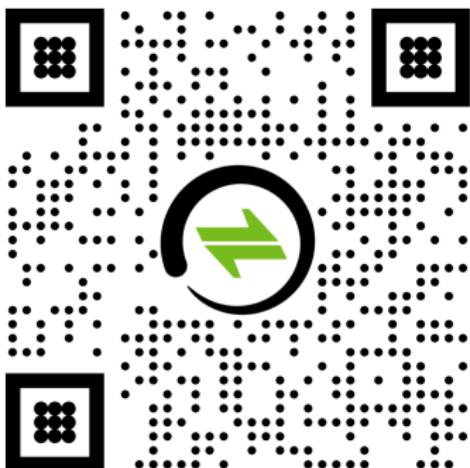


Abb. 45:

Quelle:  
QRCode Monkey, Air Quality Monitoring  
Station, 2018

## OAuth Clientside

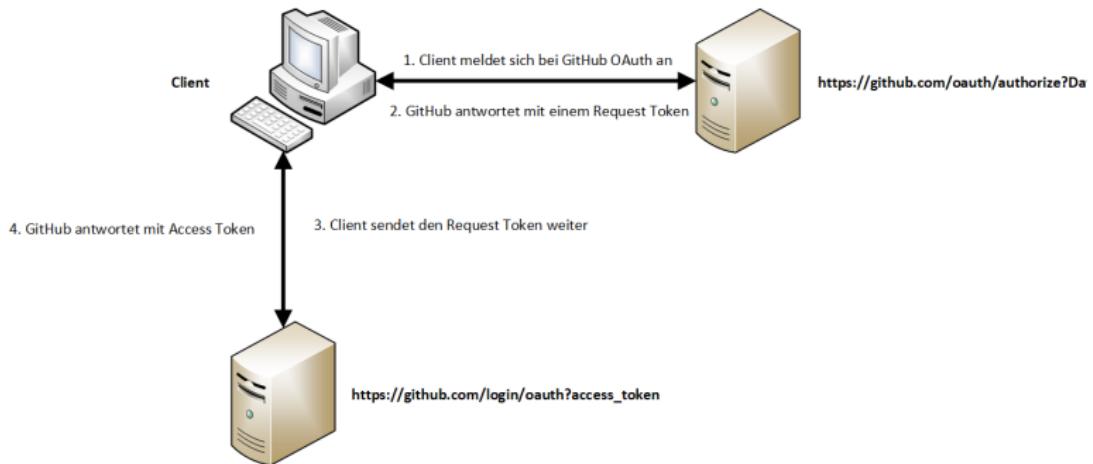


Abb. 46: OAuth nur mit Client

Quelle: Pinterics David

# **Entwicklung**

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## Aufgaben:

- Git Utils
- Intel
- Backend

Abb. 47: Quelle: GitHub, 2016

[github.com/snek-at](https://github.com/snek-at)

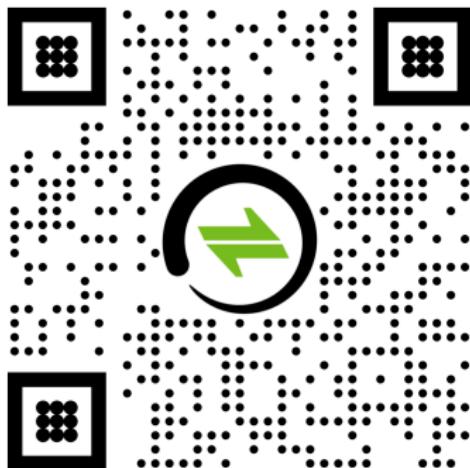


Abb. 48:

Quelle:  
QRCode Monkey, Air Quality Monitoring  
Station, 2018

## Werkzeuge:

- JavaScript
- Apollo Client
- GraphQL

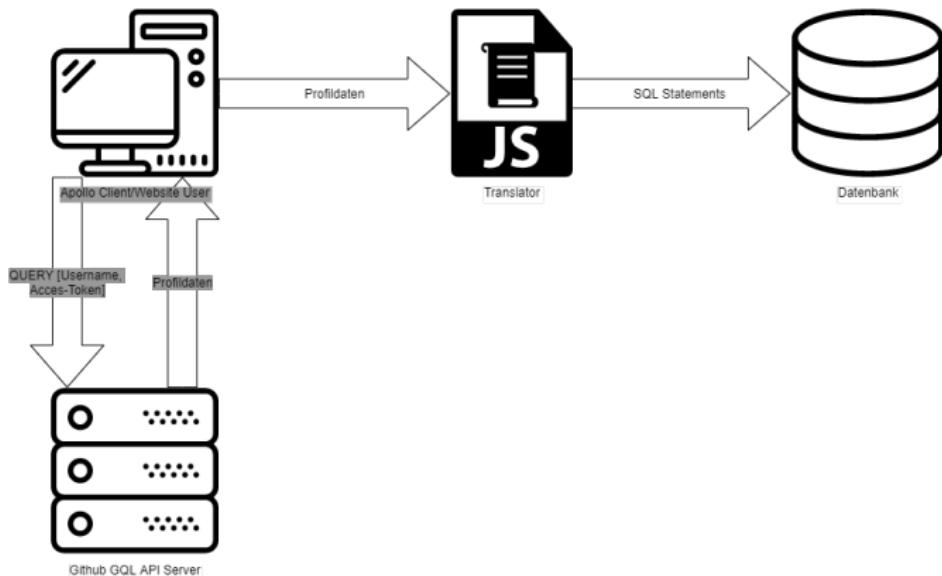


Abb. 49: **Funktionsweise GitHubUtils**

Quelle: Egger Dominik

## Translator:

- Userprofil
- Organisationen, in denen der User Mitglied ist
- Repositories vom User
- Programmiersprachen, welche in einem Repository verwendet wurden
- Contribution Kalender
- Alle einzelnen Contributions
- Statistiken pro Jahr

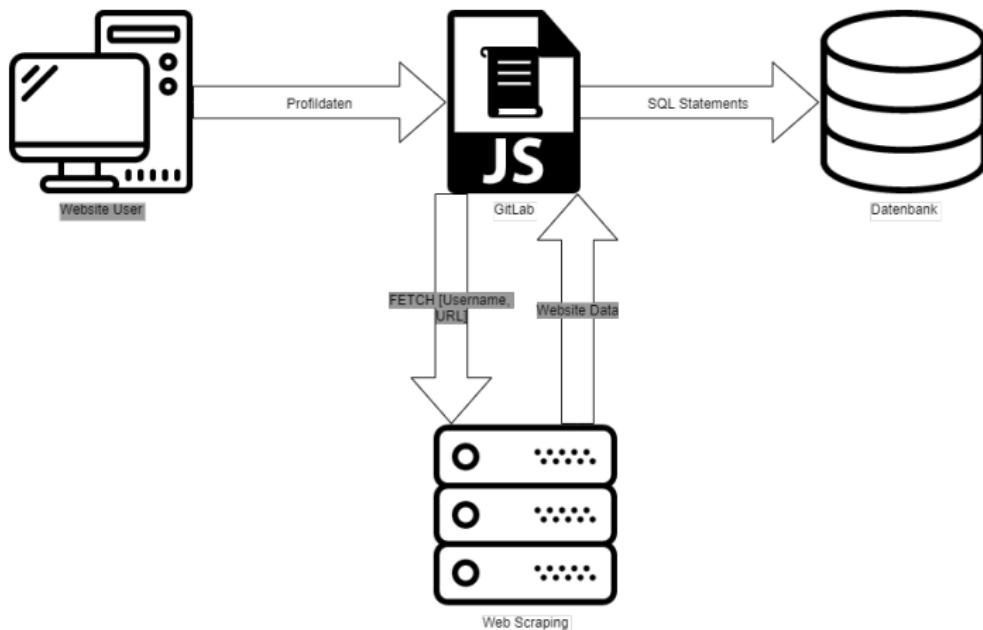


Abb. 50: **Funktionsweise GitLabUtils**  
Quelle: Auernig Elias

## Aufgaben:

- Git Utils
- Intel
- Backend

Abb. 51: Quelle: GitHub, 2016

[github.com/snek-at](https://github.com/snek-at)

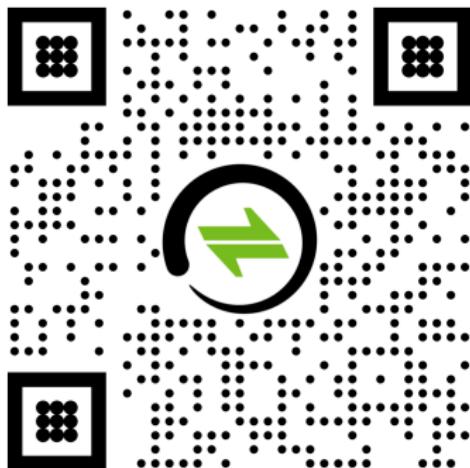


Abb. 52:

Quelle:  
QRCode Monkey, Air Quality Monitoring  
Station, 2018

## Was?:

- Modular
- Dezentralisiert
- Reduktion mittels Datenbank
- Nutzt Utils
- OSM

## Datenbank:

- CouchDB?
- AlaSQL?

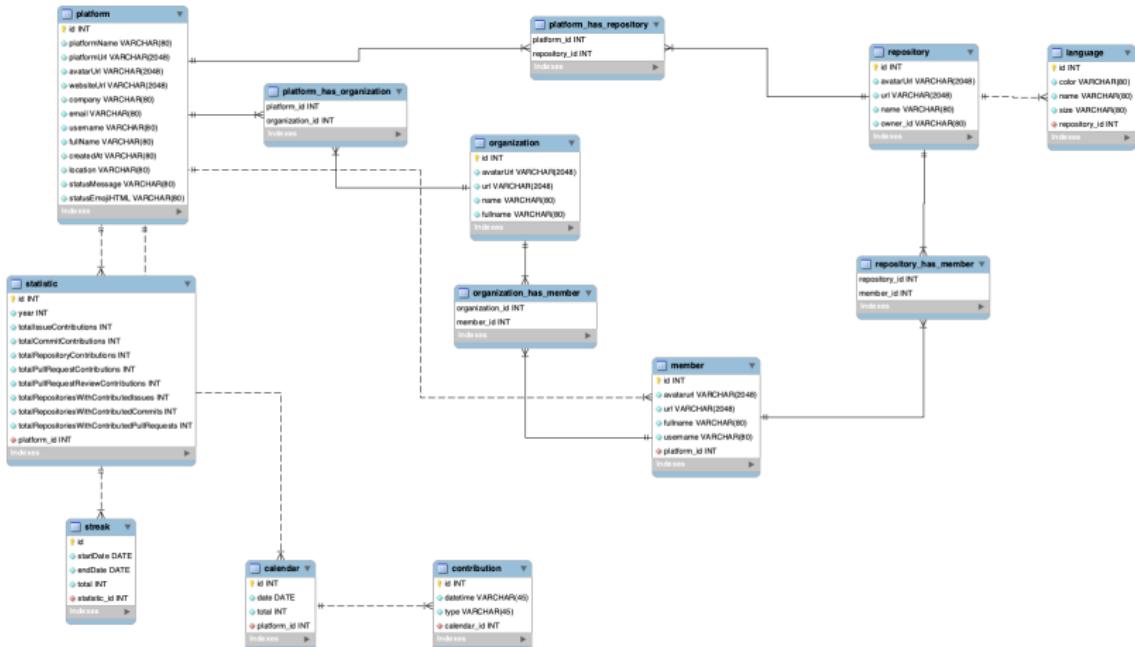


Abb. 53: Database Structure  
Quelle: Nico Schett

## OSM (Object Statement Mapping):

- Ähnlich wie ORM
- Nutzt SO (Statement Objects)
- Nutzt SQL Statements
- Models basiert

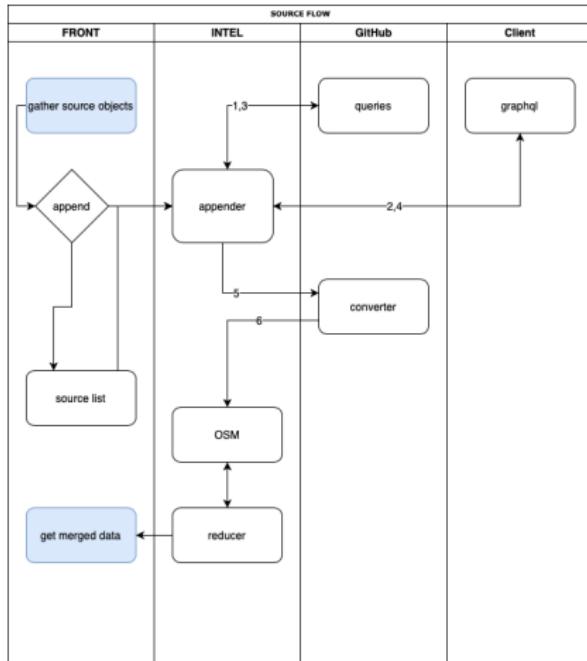


Abb. 54: Source Workflow  
Quelle: Schett Nico

## Aufgaben:

- Git Utils
- Intel
- Backend

Abb. 55: Quelle: GitHub, 2016

[github.com/snek-at](https://github.com/snek-at)

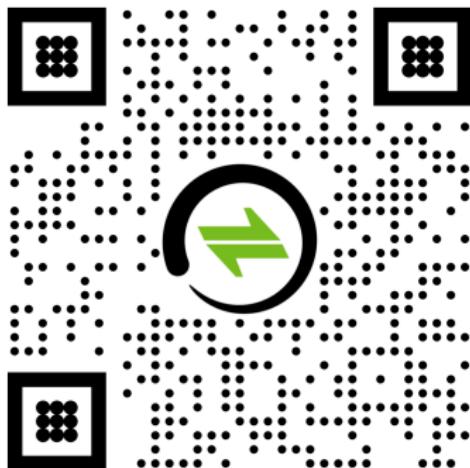
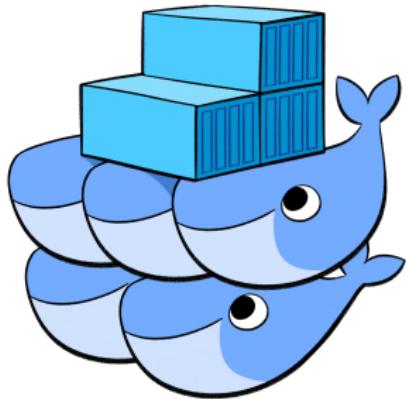


Abb. 56:

Quelle:  
QRCode Monkey, Air Quality Monitoring  
Station, 2018

Abb. 57:

## Erwartete Funktionsweise von Docker Swarm



Quelle:

<https://rominirani.com/docker-swarm-tutorial-b67470cf8872>

## Warum nicht k8s?

- Kosten?
- Zielgruppe?
- Wartungsaufwand?
- Verfügbarkeit 99ish%
- Lohnt sich ein 3Node k8s?
- Warum nicht AWS?

## Docker Compose?

- Failover?
- Webinterface?
- Monitoring?
- Know-how?

## Cool Faktor

- Günstig
- Einfach
- Schnell
- Skalierbar

## Wozu?

- CI/CD
- Load Balancing

## Wo?

- Development

## Vereinfachte Funktionsweise von Docker Swarm

**Abb. 58:** Quelle:

<https://github.com/NBISweden/LocalEGA-deploy-swarm>



**GIFT CODES**

Search gift codes

+ ADD GIFT CODE

IS ACTIVE	HKEY	BID	TID
●	F973-401F-C4DE	6403bf4d17b8472735a93b71a37e0bd0	9d88bda4657dcf17581ee91dfe6ab2a3
●	F835-B45C-379C	6403bf4d17b8472735a93b71a37e0bd0	9d88bda4657dcf17581ee91dfe6ab2a3
●	F804-A021-10C2	6403bf4d17b8472735a93b71a37e0bd0	9d88bda4657dcf17581ee91dfe6ab2a3
●	F303-8A9D-8840	6403bf4d17b8472735a93b71a37e0bd0	9d88bda4657dcf17581ee91dfe6ab2a3
●	EFF3-A5AB-D145	6403bf4d17b8472735a93b71a37e0bd0	9d88bda4657dcf17581ee91dfe6ab2a3
●	E511-16E6-1908	6403bf4d17b8472735a93b71a37e0bd0	9d88bda4657dcf17581ee91dfe6ab2a3
●	E1C2-944C-4EAC	6403bf4d17b8472735a93b71a37e0bd0	9d88bda4657dcf17581ee91dfe6ab2a3
●	D8CD-C678-3EDC	6403bf4d17b8472735a93b71a37e0bd0	9d88bda4657dcf17581ee91dfe6ab2a3
●	D6B3-2C09-4ADF	6403bf4d17b8472735a93b71a37e0bd0	9d88bda4657dcf17581ee91dfe6ab2a3
●	F4B3-1FA6-0RRR9	6403bf4d17b8472735a93b71a37e0bd0	9d88bda4657dcf17581ee91dfe6ab2a3

**Abb. 59: Promocode**  
Quelle: Kleber Florian



The screenshot shows a user interface for editing a profile page. On the left is a dark sidebar with a navigation menu:

- Search
- Pages
- User Management >
- Gift
- Images
- Documents
- Snippets
- Forms
- Settings >

The main area has a teal header bar with the text "EDITING PROFILE PAGE Aichnerc". Below it, there are tabs for "OVERVIEW" and "SETTINGS". In the top right corner, there are status indicators: "Status LIVE", "Privacy PUBLIC", and "Edit lock 0 seconds".

The profile information for "Aichnerc" is displayed, including:

- Verified: checked
- Available for hire: checked
- Username: Aichnerc
- First name: Christian
- Last name: Aichner
- Telephone: (empty field)

At the bottom, there are buttons for "SAVE DRAFT" and "PREVIEW". To the right of the preview button, it says "Last modified: 31 jan 2020, 8:34 a.m. Revisions".

Abb. 60: Profile Page  
Quelle: Kleber Florian

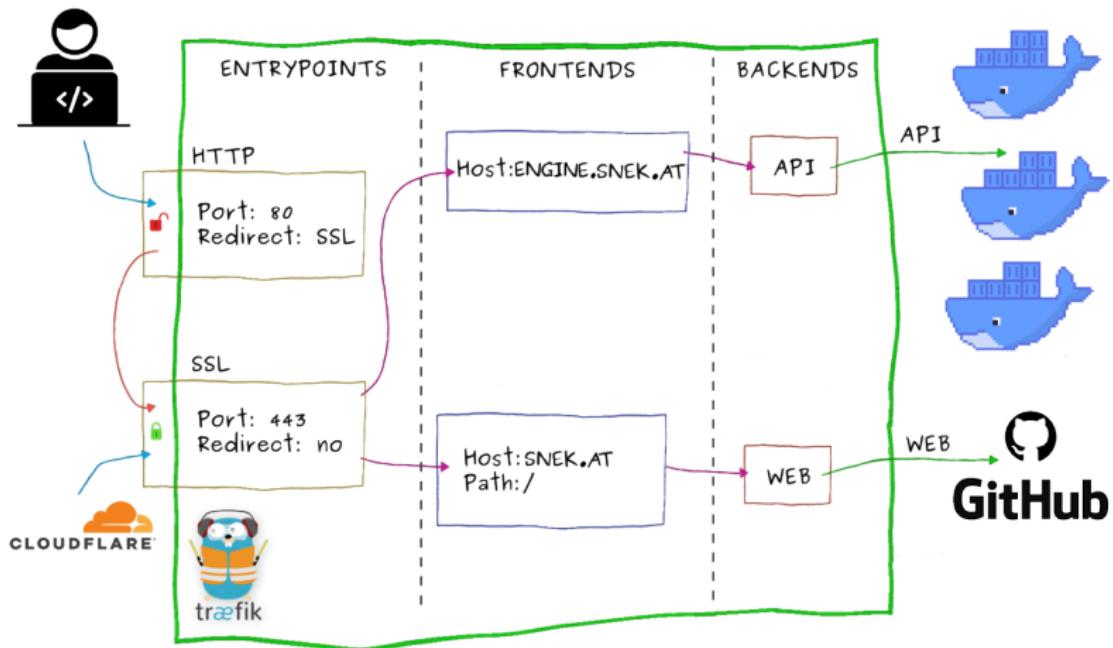
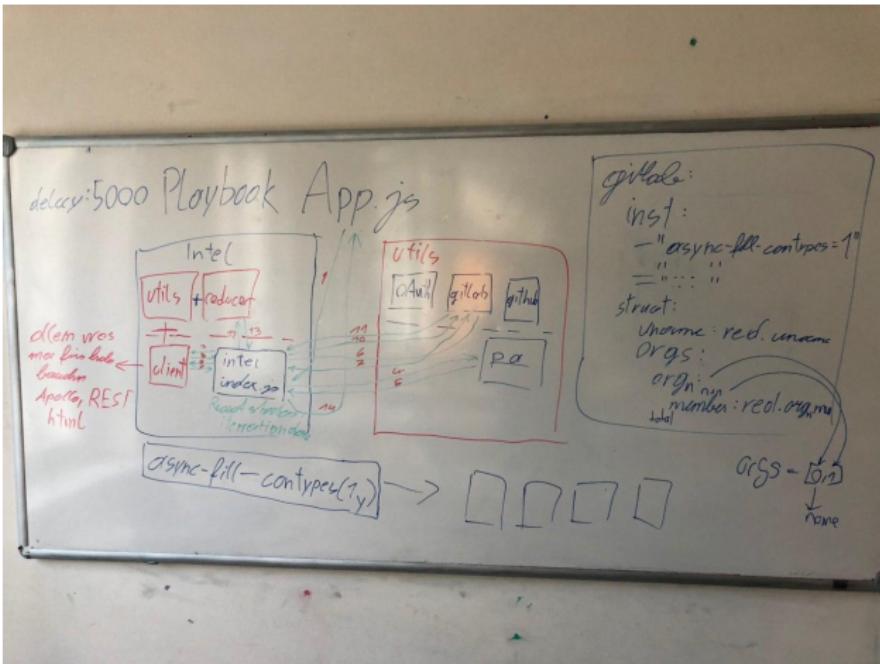
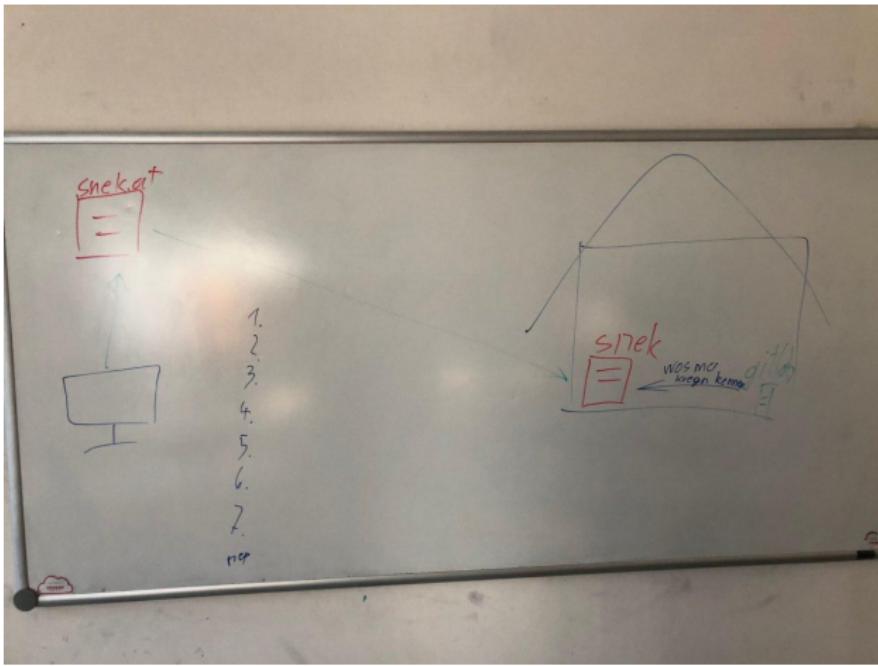


Abb. 61: Skizze Server Structure

Quelle: Kleber Florian



**Abb. 62: Methodik**  
Quelle: Kleber Florian



**Abb. 63: Methodik**  
Quelle: Kleber Florian

„SNEK ❤ ITP“ - SNEK TEAM