



DigiEduHack Solution

Austria - Improve the students' everyday life by leveraging the capabilities of a smartphone (app)

Challenge: Austria - Improve the students' everyday life by leveraging the capabilities of a Smartphone (App)

Challenge 2020

Supporting Students' Self-Management in Everyday University Life

Creating more time & structure in students life

The app allows students to flexibly adapt their **time planning** to **changing conditions** more easily & stress-free with our AI, **EDU**buddy. Students can visualise and create flexible tasks around their existing commitments, find study buddies and locations on campus with NFC.

Team: The TEES

Team members

Tim Sagaster, Elena Molinari, Eleonora Tassan, Stefanie Ziegler

Members roles and background

Tim Sagaster: Computer Science Bachelor's Student and Physics Master's Student, Graz University of Technology & University of Graz

Eleonora Tassan: Digital Communication Master's Student, University of Padua

Elena Molinari: Human-Computer Interaction and Design Master's Student, EIT Digital

Stefanie Ziegler: Software Engineering Bachelor's Student, Graz University of Technology

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Solution Details

Solution description

We propose a set of features that could be implemented to create a more tailored and personal students app. Our features aim to enable students to **manage their university life better** and manage their daily workload.

The Mobile First Project (WU Vienna, University of Graz and VetMed Vienna) already foresees 3 core functions for the future students app (Chatbot, electronical student ID and NFC as door opener). However, it was our task to hack more functions valuable to students. After doing the student journey map and learning about the value proposition canvas, we discovered that the most relevant painpoint was planning university life.

We did not focus on the classic features of signing up for exams or checking grades, because we believe that many students' apps are already providing those services. We reflected about a way in which an app could further **support a student's academic life**, and we came to the conclusion that implementing some **artificial intelligence** elements could be a successful idea.

Our solution is organized around the concepts of courses and tasks. For each course, the student can **visualize the expected workload** and be supported in managing the required time to complete the course. Students will be able to better their **time-management** with the help of an artificial intelligence, called "**EDU Buddy**". EDU Buddy will fill the dedicated study times provided by the users with an **optimal study plan**. To do this the app is integrated into the university system, gaining access to information about the courses the student is enrolled in and the open tasks and deadlines of each course.

Besides this, the student can **connect** to other students with similar interests and different abilities to study together or complete a group work, by adding interests, skills and their available study time in their profile, students can be matched with others thanks to a list that shows people with same needs.

The app also provides live push notifications regarding **updates** on modified **task** descriptions and changed **deadlines**, lecture hours, or lecture halls, which the professor can add directly. This is an easy way to send information both for the professor (this is not difficult) and for the students who **immediately** receive a formal notice, which is **not** an email.

Another feature we thought could improve the daily life of students is to provide additional information on their **location** based on **NFC**. This could mean providing **information** on current and future courses held in a lecture hall or the office hours and the people working in a specific room. Adding to this, the students could be provided with a floor plan of the building they are currently in and see their location on it.

A glimpse at how we imagined these features could look like can be found in the gallery section.

Solution context

Time management and planning in **everyday university life** are major challenges that students face. Deadlines that are postponed and other commitments that students have to meet contribute to the fact that students have to spend a lot of time trying to get a clear picture of the **time investment required** for their studies.

In the context of this hackathon, we had to find a solution to enable students to **facilitate** their **daily study life** by leveraging the capabilities of an **open source smartphone app**, which currently is being developed in cooperation with 3 universities in Austria and already has a few features.

So, we decided to create a tool-set that gives students a better overview of their time and allows them to plan more precisely when they can do their tasks and find colleagues to work with. We also wanted to focus on functionalities that aren't available through **common student life management apps** or university access apps.

Solution target group

The target group of our solution are all sorts of university students. However, since every one of us has different needs we thought about the pain points we encountered in our student life and then considered the ones other people might have.

Students who **struggle** with **time management** and **working students** want to understand time requirements, allocate appropriate time to tasks, getting course updates rapidly, and ought to organize their study time efficiently. Hence, we would like to provide them with EDU Buddy who is in charge of their time management.

New students, visiting students, and students that want to meet **like-minded** new people are experiencing problems in finding people to study with or do group works, so we came up with the study buddies.

For new students, visiting students, and students that **need maximum efficiency**, a real problem is getting lost on campus, so we thought about the location and information system using NFC.

With this toolset we would like to make higher education more accessible, especially for students for whom other obligations in everyday life also play an important role, such as students who work, students with children or those suffering from a chronic illness.

Solution impact

Our solution would mainly impact the **time management** effectiveness, efficiency, and optimality of students' everyday life. It would provide strong outcomes with little effort thanks to the use of AI. The tool will be able to fill study time accordingly to the calendar of each student by considering deadlines, time requirements for tasks, and other dedications. It would considerably lower the level of anxiety and stress students face in their life, providing beneficial effects in the **cognitive, emotional and physiologic** environment of the student.

The solution would also improve **social connections** and **interactions** between peers, by offering the "Study Buddy" tool, which can help students in finding buddies for several activities, from study groups to teamwork projects.

Universities profit above all from the **feedback** they receive from students' time entries.

*In summary, the biggest pro is that the app allows students to **flexibly adapt** to a **rapidly changing learning environment**, like the students are facing **right now**.*

Solution tweet text

An Artificial Intelligence - powered time manager, campus navigation assistant, study buddy finder and much more! The pros are effectiveness and a stress-free student life.

Solution innovativeness

We have been investigating different time management applications and have not found a tool that allows the planning of the daily study schedule with some **flexibility**. Even when we talk about "planning", we rarely talk about "flexibility", although this is a **need in everyday student life**, especially when the **academic environment** is **constantly changing**.

The use of **AI** in this integrated fashion is something that cannot be seen anywhere else, because until now there was no way of getting the needed **data**. Combining the **integration** into the university system and the information added by the students provides a **unique dataset** that can be leveraged by the AI to **streamline everyday student life**. The "Study buddy" feature again builds on the data provided by the students to solve the problem of **finding diverse and fitting groups**. The usage of NFC to get information on wherever you are in the University allows for an **augmented reality** using the screens most students already have, by displaying information on rooms and events directly on campus.

Solution transferability

Because the app will be open source, **not only** universities **in austria**, but **universities all over europe & beyond** can integrate the application into their system and **tailor it** to their **specific needs**. Due to the current pandemic situation, most of the **data** on the courses and tasks **already is available** online in one form or the other and should not be too **difficult to transfer** to the application.

The NFC location and information feature should also be quite easy to implement, because most universities already have detailed floor plans and information on rooms for internal use. The installation of the NFC access points should not provide a huge challenge, as passive NFC chips are very **inexpensive** and **easy to install**. For example a sticker with the chip could be placed next to the entrance to every room.

We can also imagine that the innovation will arouse interest **outside** of educational organizations, as the functionality of the AI Planner can certainly be important for **institutions** from the **business world**.

Solution sustainability

The innovation is **stable** in terms of sustainability.

The **short term sustainability** is given by the fact that most of the resources needed to use the AI Calendar functionality already exist. This refers mainly to information such as the courses and deadlines that are **already available** online at most universities due to the pandemic. At the same time, it relies on **open file formats**, such as ".ical" to import calendars with dates that are already

commonly used in universities and other environments.

As the app is open source, institutions can **check early on** whether a use case and compatibility exists for it, which significantly reduces the risk of implementation.

The **medium & longterm sustainability** is also stable, as there is very little dependency on external factors. Here we have found updates of mobile devices as the only sensitive influencing factor, which is a risk factor for all mobile apps.

The proposed features provide valuable functionalities for the students with **contained cost** to the universities. Additionally the universities get **valuable data** from the students, that can be used to further increase the quality of education. With time the aggregated data on courses and tasks will **grow** and the **AI** will get even **better** at approximating the time requirements. Therefore our features provide **long-term benefits to universities**.

Solution team work

We really enjoyed working as a team and it was a pleasant surprise since we met during the pre-Hack Event on Monday. We believed each of us had an impact on our work and management of resources and time. We did have different skills and we were able to use them to realize the best possible outcome for this hackathon.