GRADUATION INTERNSHIP REPORT



Aggregated Data Management in a Digital Portfolio

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| Title: | Improving Usability of Portflow Evidence Section |
| Portfolio repository: | https://github.com/EditaAnomaly/S8-GI-Drieam/wiki |
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Foreword

This report is an overview of the Graduation Internship program of the Fontys University of Applied Sciences carried out at the Drieam ed-tech company. It is written using APA style format following the provided Internship Report Guidelines Template.

The aim of the internship was to improve the usability of a part of the Drieam’s product. The product is a digital portfolio called Portflow and the focus was on improving the aggregated data management within the portfolio for students.

During this internship I was a part of a development team working on improving and maintaining the Portflow. The team consisted of several full-stack developers with years of experience in the field. I was the member responsible for the research, design and the development of the My Evidence section of the product. It is the section that enables users to manage all their aggregated data (evidence). This paper is an overview of my efforts, mostly focused on the process and results of the completed work.

I have grown a lot during these last 5 months, both professionally and personally. The guidance received during this internship was greatly appreciated, the support from my tutor and mentors helped me face my challenges and become a better developer.

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Summary

This report describes the duration of the graduation internship at Drieam, an education technology company. It offers various software solutions that aid educators and students.

The assignment was to find a way to improve the usability of Portflow Evidence Section. The section responsible for managing all aggregated data and is only accessible to the owner of the portfolio. The work began in a team of 5-9 developers and design thinking was the chosen approach. First I learnt more about the company, their culture and products. Second I looked into the competitors to gain insight into the existing products in the market. This helped to better understand the existing problem/ opportunity and start visualizing the potential solution that was later implemented.

The lead concept was created after several iterations of sketching and wireframing the potential solutions and reviewing them with the stakeholders. The solution is a reinvented evidence table that provides a better overview of all aggregated evidence as well as offers tools to manage it. The solution is a production ready code that should be deployed and available to the users as of the next study year.

The internship concluded with testing the solution with students that already are familiar with the product.

Glossary

|  |  |
| --- | --- |
| Notation | Description |
| EdTech | Academic preparation of students using digital means. |
| LMS | Learning Management System that offers administration, automation and tracking of educational courses, training programs and materials. |
| LTI | Learning Tools Interoperability is a series of edtech specifications for a standard that enables applications to be integrated with a LMS. |
| Scrum |  |
| Agile |  |
| Design Thinking |  |
| Double Diamond model |  |
| PR | Pull Request is an event where one developer asks another to review the code that they would like to merge into the project in the context of version control management system. |
| Tender | A formal process where businesses are bidding and competing for a contract that requires specific skills or services on an ongoing basis. |

Should be alphabetical!

# Chapter 1: Introduction

Drieam is an ed-tech company that was founded in 2014 by Gaston, Tim and Bart. While studying at the Eindhoven University of Technology, they had a shared vision of changing the way students interact digitally. Thus, the name of the company – three students with a shared dream. One of the first applications they created was FeedPulse, that enabled educators and students to digitally share feedback as a central part of the learning process. It was very successful and is being actively used by Fontys student too.

Since then, the company has grown to over 50 employees building and maintaining many more applications. The Drieam has become the market leader in its field in the Benelux region and is even expanding overseas. Prestigious universities such as Yale, Cambridge and IMD use Drieam’s applications on a daily basis.

Portflow is another successful product of the company. It is a student-led development and assessment portfolio application. It was developed adhering to the Learning Tools Interoperability (LTI) standard, enabling easy integration with a Learning Management System (LMS). Therefore, it can be launched within the context of a LMS such as Canvas and Brightspace or used as a stand-alone app. The student’s assignment is to help improve part of it.

More information about the assignment can be found in the following chapter. Chapter 2 explains the assignment in more detail by providing more context. Chapter 3 explains the process and describes the results. The conclusions and recommendations can be found in Chapter 4. Some of the supporting, process related files (i.e., sketches, wireframes, user requirements and other documents) are included in the Appendixes and can also be found in the [repository](https://github.com/EditaAnomaly/S8-GI-Drieam).

# Chapter 2: Assignment Overview

## 3.1 Opportunities

Portflow is used by thousands of students across the globe. It can be used for a project, subject or entire course. It allows students to gather and showcase the evidence of work done (documents, presentations, posters, images, URLs, demo recordings etc.) in a meaningful way. However, with every use of portfolio more and more evidence is aggregated that it may become challenging to keep track of. For this purpose, there is a “My Evidence” section in each portfolio where the owner can overview and manage all of their files.

Graphical user interface, text, application, email, Teams

Description automatically generated

Image 1. Example of current My Evidence Section of Portflow.

My Evidence offers a rather simple list at the moment to help overview the aggregated data and does not offer many features to manage the contents. It is the assignment of the student to change that. The company wishes to offer a better overview and more functionalities to help the students manage the data better.

## 3.2. Goals

The aim of the assignment is to allow students to manage the evidence of their portfolio from My Evidence section. In addition, there should be a better overview of the evidence related statistics. The student’s goal is to modernize and further enhance the evidence overview to allow users to manage their aggregated data (evidence) in a convenient and meaningful way.

The company would like to convert this basic list into a dashboard-like page with an overview of open summaries of all evidence and other useful features. As by aggregating the evidence data, students and teachers can have a clearer picture of the portfolio progress.

## 3.3. The Approach

Drieam uses Scrum to manage the work within the teams in a systematic way. Student is joining all the activities as an equal team member. < overall working in iterations and feedback collection from stakeholders. Can explain how planning was made and how it was implemented.>

In addition, student applied Design to help phase the project.

The Agile methodology is already used within the company, due to its flexibility and the values matching with the company’s internal culture. The development team, that the student is a part of, already uses Scrum Framework in their daily activities. The framework was chosen as it enables the team to quickly adapt to the changing situations, receive frequent feedback, and supports frequent releases.

The student joins the daily stand-ups from day one to stay in the loop and will receive/create own epics and tasks as soon as the development stage is reached.

## Phases of the project

The table below illustrates the rough stages of the project with the activity examples for each phase. Research and analysis will continue throughout the duration of the internship as it is Research based and the student will be learning and practising new things at every stage. Next, design, development and deployment phases may be looped over and over during the internship as it is organised in iterations. This way improvements can be made in a proper manner. Finally, the wrap up phase finalises the internship period and delivers the outcome.

## Time plan and milestones

The work is organised in 2 weeklong iterations based on Scrum framework. The team maintains a backlog using Zenhub (an extension of Github). Everyone is assigned to a task or an Epic, peer programming is also quite common. Every morning the team gathers for a Stand Up to discuss the challenges, what has been done and the plans for the day. This helps keep everyone in the loop and identify hindrances in time. There are also refinement sessions when needed and retrospectives to review the progress made and how it was achieved. The Scrum events are led by a Scrum Master who helps keep an overview of all matters.

The student will be joining the development team while systematically working on the assignment completion. The table below represents phases and main milestones over a timeline.

# Chapter 4: Process and Results

4.1 The Research

Refer to research doc, mention the competitor check-up, analysing internal docs and observing the way of working by participating in all important events. In addition, emphasize that research does not end with this phase, that it carries on alongside any other activities performed.

## 4.2 The Design

Checking in on students and teachers that started to use Portflow, talks with PO and UX designers and their feedback. Then refer to Design Document and talk about iterative sketching and wireframing and feedback received.

4.3 The Realization

Refinement, peer programming, code reviews, mention tools too (github, Zenhub, Jira, notion.

# Chapter 5: Conclusions and Recommendations

5.1 The Advice

Talk about how it is better now and how could it be further improved.

## 5.2 The Management

Something something

Personal Reflection

Management >> reflect on how you handled the project and work, how you grew as a professional (knowledge and skills) as well as personally (traits and experience). Mention personal challenges and how you overcame them.

References

**There are no sources in the current document.**