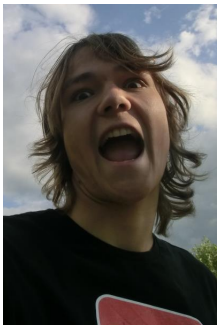
Contextproject Programming Life
Group 2 - GEVATT
Human-Computer Interaction

TU Delft



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Abstract

Ruben

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1 Introduction

We are group two of the Programming Live Contextproject, a second year course of Computer Science at Delft University of Technology. We will develop a tool for clinical geneticists, which will help to determine the diseases of a person by analyzing their DNA. The name of our tool is GEVATT, which is an abbreviation for GEnetic Variations Analyzer Through Triodata. This tool will visualize the mutations in DNA, triodata and gene interaction. The product will be intuitive to use and will be able to handle existing data to compare the results to. The goal is to develop easier to use software than currently at hand within a fixed time frame.

2 User

Ruben
General description of the user and personas.

3 Situation

Mathijs
How will the product be used?

4 Task Analysis

Mathijs
What tasks does the user need to do?

5 Context Inquiry

A good idea is to plan a contextual inquiry, this means discovering the needs of the customer at the workplace. First a small interview is held with the customer to get to know each other, acquire permission and explain the process and focus of the inquiry. This will be followed by a inquiry of a couple of hours at the workplace.

There are a lot of genetic analyses tools available, so there are many people available for an inquiry. We could discover more features by for example asking what the customer is missing. Then we ask the customer how it is done now and how it could be done easier. Furthermore we could also improve existing features by asking what problems there occur while performing the task at hand.

For this project we did not have real customers to hold a context inquiry. However we could ask our teaching assistants to act as a customer and get to know their needs.

6 Product Design

Product design plays an essential rol in making a product user friendly and human centred. Our product mainly focusses on visualisation. Besides infor-

mation retrieval the most important part is the way information is visualised and therefore design is important. Visualisations could give nice insights, but presenting this in a user friendly and enjoyable way is even better.

One of the design aspects is the layout of the whole application. We tried to use clear distinction between navigation and application. Furthermore we use clean typography and clear navigation so users could easily find what they want. If there's an error message to show to the user, these are presented with meaningful design. E.g. an error message features a red background and an information message features a blue background.

In the design we also tried to separate different parts of the application on one window. E.g. the mutation visualisation page features multiple components and every component has it's own heading.

7 Usability Evaluation

When designing the application usability has always been a key aspect. We have chosen for a web application that ensures the client doesn't have to download or install any new software. furthermore we tried to make the application as user friendly as possible. This is done by making objects clickable and returning information about that specific object back to the user.

When the client goes to the site a standard login screen is promted. After login in the client can go to patients to see their dashboard. From there they can go to the patients page to chose a patient and start analysing it's DNA. The dashboard doesn't contain a lot of information to make sure the client doesn't get lost.

In the mutations overview the client can click on a mutation to get more information about the gene it is in. To show the mutations are clickable they change color when hovering over them with the mouse cursor.

References