

**Dawid Wozniak:**

Let's start. You see it also on your screen so it's recording what we are saying but it's not recording us or what is on the screen. It is GitTruck. It is a new beta version because it's slightly different that it used to be here. It's not that much change. The first change is here that we have some footer and you can invoke some like information about the GitTruck on the screen. So, let's analyse GitTruck with the GitTruck. So, it's preanalysed. It should be relatively quick to load, and we have the same structure as it used to be. But there are a few improvements. The one improvement that it's here, it's the chart depth. So now we have the full chart depth, but if you would like to see just one level, so it is exactly what you would see if you went to the File Explorer, you can set it to one and then you can increase it and it also shows the level of the complexity of your project. So, if you increase it to three or four and you see like a lot of bubbles appears, then it means that on this level you have a lot of actually meaningful files, not just the structure. So here, it's not that big projects. So, I will stay with the full option. Another improvement that is pleasant visually. Now you can resize the size of the visualisation and of those panels. So, it is just for people who use very big screens, and they are maybe wanting to manage this space somehow differently. So, let's stay with more or less equal spread as it used to be. And now when I go to the detail of „app” folder. We have a new section that is a commit history and here it's not clickable action, but you have some like glimpse on the commit history. We have a tab that is designed special for it. So, as you can see now, we have better experience with that tab. So, this information about the commit metric loads kind of this view. So, if I close that, it's gone, and this is also gone here hopefully. Then when I close this, you can reopen this section if you want to. So, let's go to the commits directly and it is what I work on for my master thesis. So basically, the commit messages how they want to be represented and what is useful for people, what is not useful. So, the first thing what we can do, it sorted by dates and the latest come on the top and all oldest are on the bottom and we group them by day. So here, I just published a version four but here we had some improvement on this day and we can also change the order from the oldest to the latest and we can sort by author. So, you can say OK, all those commits were done by Dawid and all of those were done by Jonas and Thomas and so on. So, I will stay with the date. It's better for the rest of the presentation. Now you can search for part of the commit message. So, let's say „fix” and then we have only commits that include this word in the commit message. Maybe it's not enough, so you tick this box and then you also have commits that included this word in the description, so it has some pull requests that were merged. Then maybe you are just interested in some authors, so you just want to see fixes done by Dawid and Emilia. You have it here and you can also specify the time range if you don't change this value. It is also informative, so this is the date of the oldest coming and this is the latest. So, if I change some criteria, let's say this, then this date has changed. If you set it to some value, then it will persist. We will never change it automatically. And finally, we have something for merge commit. So here we have some commits and then if I tick this box, it should be gone. I don't know why they are not gone. I think that here it's just because different format than we expected. The last feature, that I would like to present, is this option. So, if I click on particular commit, then I have more information about it. The message description, hash, when it was exactly created, by whom, and I can show edited files. So now, I fetch the files that were changed with this commit and if they are still present in the repository, we highlight them here and you have the list of them below there. So even if I'm here... Actually now you can see all of them in this visualisation, but if I'm, let's say just in source code, but the changes were done in different places, you can still see it on the list, but it's not visible here because of the level of the visualisation you are at. Yeah, so that's more or less what I wanted to show during the presentation and now I have the first question. So if you look at this product do you feel that information about the commit messages is presented in the clear and easy to navigate UI?

**Leonel:**

Yes.

**Dawid Wozniak:**

OK. And that's good, that's a good start. And if you need it to give a great from zero to ten when zero means that it's a completely not usable to ten that is like perfect you will not change anything that there is no correction needed, what the great would be?

**Leonel:**

eight, maybe seven, I would say.

**Dawid Wozniak:**

So if you gave it seven or seven half, an average, I think that there is some room for improvement. So, if you have something got something to change, you can say it or it's just maybe the general feeling like you don't like colours or you think that they should be structured differently than it is also good feedback. It is just a matter of taste.

**Leonel:**

Sure. Yes, I think the panel to the right where you have all these filters and you show the history, the complete history and all the commits there, I think it's a kind of square looking, and it is a bit too fixed. For instance, to select the the range of dates, I would think something easier to handle would be better some kind of bar that you can slide to the left or to the right instead of going through the calendar and so on. The same for authors. For instance, you could have, since indeed for this project there are not too many authors, perhaps you could show some small icons or some circles with the name of that, so I could just click on them instead of using the dropdown list. For a project in which, you have too many authors that interface could be customised, and you could show the authors in a different way. Perhaps in that case the author list would work better. I don't know if you have too many authors, perhaps this bar would need to be huge. Yeah, regarding the futures, at first glance I am not sure if I could use Regex if I could use Asterix and logic operators and so on here.

**Dawid Wozniak:**

Not now. So, Regex is not supported. It's just for now pure text.

**Leonel:**

Hmm. Yeah, that, that that's fine. If that would be a feature of the of the of the filter, I would add some hints, some examples so the user could know how to use it. In this case, it's fine if you just enter the keywords. I guess if you are more than one keyword, then the operator would be „AND”. So, if you use both perhaps. I don't know if the behaviour is different, I would add some hint below so the user can know that. Something else perhaps regarding the commit history, I could see all the commits. I think this is something that it should be able to do it. The interactivity. For instance, if I click in those keywords in the commits, perhaps you could use that as filter for other comments. So, if I click on „fix” then I could see all commits that have a „fix” as a keyword. If I click in the name of an author, I could filter all the commits in which this author was involved. So, you could use the words in the commit as a filter. There are filters to navigate the commits. Usually when one does that, one also wants to navigate the history. So now, I would want to be able to go back to the history because perhaps I click on this author, I could see something, but then I want to go back and see what the other author was involved and so on. This is a kind of exploration. So, I want to know somethings but then go back and then go forward. For an answer, right now, the information in the right thing looks a bit too static like it's a description of a lot of information which is very interesting, but it seems a bit not too interactive and I'm not sure if at first glance when you show me that, I

could see, for instance, which files were involved in a commit. Then this is very helpful, but I only know that once I click on the commit. I see the button „show the edited files” and this is useful but perhaps a user could not click on the commit and then they would not know this feature, which I think it's really helpful. So yeah.

**Dawid Wozniak:**

Okay, I think that it's good feedback. You also kind of answer the next question, but maybe you have some more to say. So, the next question is what is still missing regarding this commit message history, and you mentioned a few things. So, if you have more suggestion, you can also say it now. Otherwise, we can go to the next question as you kind of anticipated what I'm going to ask in the next part.

**Leonel:**

I would say it's very important for the user that you facilitate the exploration, so hopefully I can click on only few things to get the information that I want. Sometimes the user doesn't know what they really need. They have to discover all these features by interacting. So, for instance, something that you could do is perhaps, if I move the mouse over the commits, you could update the visualisation. So, I could already see what files were involved. You could add perhaps an icon or something, so I don't have to click on the commit to have more details and then click on the „show me the edited files”. But I could do that from this interface and then the visualisation will react according to what commit I'm looking at. Yeah, but to this point, I think the visualisation is the most interesting part. This is because it's very visual, it has a lot of colours at the first glance I wondered about the encoding so that the colour is very clear to me. What is its meaning? But the size of the notes was not so clear. I guess the size of the files or the number of files.

**Dawid Wozniak:**

Yeah. So, this is based on the size of the file. So, this file is the biggest file in this asset folder and if you take the ratio between this size and that size, it should be more or less as it is here. Yeah. So, if you multiply, I don't know, like 100 bubbles like that then it would be this file. So. It is structured in this way. And now I have the last question on this scale manner. So, if you take this product for now, how beneficial would it be for you to use it in your work for any purpose on the scale also from zero that you will never use it to ten that you will use it for all your project? Yeah. So that's the question.

**Leonel:**

I would say 7.

**Dawid Wozniak:**

OK. And why is so? I remember all the things that you mentioned, but maybe there is something specific that we are still missing or something that it's not supported here, and you need it for your work?

**Leonel:**

Yes, I think it's really helpful to have this overview very quickly and ensemble to understand. So, you get this structure, and you get the number of files involved, the size of the files. So, you quickly have an idea of how large is this is this software. It requires several interactions to get more particular information, and their interactions are split into the left pane, so I can change the type of the chart and the metrics and so on. To the right I can get information regarding a particular files that is in my project that that's fine. Somehow, I would expect to have the that integrated into the visualisation. I want to click on the file and perhaps from that I can identify some filters and have like the interaction integrated with the visualisation more than split from the visualisation into the panels. I would say

the information looks very useful and is in a good way distributed so I can make sense of it in a better way than it. It is usually provided in the ripple when I get it directly from there and having the visualisation it's really, really helpful.

**Dawid Wozniak:**

So the next question is - what would be your primary usage of this commit tab? Do you have any scenarios that you think that it would be useful to go there and actually using the sorting and filtering for finding something or doing something what you need to do?

**Leonel:**

Yes, I would say the first usage scenario, I would think, it's sometimes when ones need to quickly assess how difficult something could be addressed as a task. And for that, we need to know how many files are involved, how those files are distributed. Perhaps, if I address this package first, then I will find too many small files that I need to take into account. If I want to distribute the work over several developers, perhaps this kind of association could help me to do that task. I think yes, the sorting and the filter options are quite useful because, sure, the size of the files is encoded in the area of the circle, sometimes could be a bit difficult to compare when we want to compare files that are in different structures over here. So, there's something I guess for the future. Some good help on that.

**Dawid Wozniak:**

Okay so it was my last question about the product, but now it's time for you if you would like to say something that I haven't asked about. You have some general comments, something that you think should be included and so it's time for you to say something or ask about something. If not, then I have a few questions about you. So, I can actually check, if it correlates with other people with the same carer or work experience.

**Leonel:**

A few thoughts about that, because I am not sure if I have really ideas of how improve this, but I think it's, it's really important when we analyse file in a repo is, it's the evolution of the file. So now, the file is very big, but in the past, it was very small and there is a lot of work on this file, and we want to detect that and so on. Perhaps because there are several visual variables that are not used, like the intensity of the colour. So now you are using the colour, but you could also make same colour more transparent or translucent, so you could encode another metric.

**Dawid Wozniak:**

So basically like compare... like having two metrics at once like file extension and then at the same time number of commits together.

**Leonel:**

Exactly. Because then you can answer more complex question and you could say OK, this file is very big, but it has not been touched in the last one year. So, this is very stable. Maybe this other package has a lot of files. It is very active, and the files are very small because maybe this is something very automatic. Maybe it's generated code, I don't know. I cannot answer more interesting questions once I can involve more metrics. Right now, I can do that, but I have to do it in different visualisations and then I have to compare that in in my mind so that would be something that could be beneficial, perhaps also could be interesting to analyse the use of coordinate views. So you could have the same view and you could replicate the same view but showing different metrics and then the user could compare same asset like a same file. It's seen in different views once the codes are different metric.

**Dawid Wozniak:**

Yep, that's a very nice suggestion and comments. Thank you for that. And now I will ask you a few questions about you. So how many years have you worked professionally with IT projects, so including part time jobs and it is in years, so you don't need to be very precise to months or weeks?

**Leonel:**

20 years.

**Dawid Wozniak:**

Thank you for the answer. And what is your primary role? Have you defined that?

**Leonel:**

A professor at the university.

**Dawid Wozniak:**

Okay and when you think about your team or team that you grade as a professor, how big they are in average including like developer, testers, product managers. If you have any, what is the average size you think?

**Leonel:**

30 people.

**Dawid Wozniak:**

Okay and if you have your average project, on average, how many commits are in your project like you can say per day, per week, per month, per year. What is more comfortable to you? I can scale it when I need it.

**Leonel:**

Hard to say because it depends on the project. I don't know, I would say between 50 and 100 per day, something like that.

**Dawid Wozniak:**

OK. I have the same question about files. So here we can see that it's like 112 files. If you think this time about the files that you actually write and that it's not autogenerated or like npm modules. So, do you know how many files on average are there?

**Leonel:**

It is very difficult because I have been involved in project, including in industry and also projected in academia. I would say in academia it is smaller project. So, 100 files would be a standard size. I could say for a small project in industry, I guess 10 thousands. It depends on how big the project is.

**Dawid Wozniak:**

Yeah. So that was the last question. And the final information is that I will be writing master thesis based on this. So, if you would like to be informed about the project results, it would be in the article format. So, it would not be very long but hopefully valuable paper, if you would like to read it. I can send it to you when it's done. So, then you can read it and maybe it would be useful for some other projects or some other academia papers that you or your student are going to write in the future. So, if you would like to that, I can do that. You just need to confirm that you would like to have it and then it would be in your inbox when it's done.

**Leonel:**

Sure. I would be happy to know how you put it in your project. It looks very, very interesting.

**Dawid Wozniak:**

OK, so that's all I will stop the transcription right now, thank you for the participation.