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| Participant ID | Raw Data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Code                                                                   | Concept                  | Category           |
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| P8             | <p>Researcher: When you think about the dangers of using LLM tools.. you already mentioned about beginners developers using, can you expand your view about this?</p> <p>P8: Yeah. To me, that's a risk for using AI, which is: if someone is not willing to learn more on the software engineering side as... Like, someone who got a job and then [that person is] not willing to expand the mastery [of their skills] in what software engineering is about, and over-engineering, [not knowing] how to minimize software engineering, how to write better, clean and maintainable code systems; and those who do not want to do the code review and just fully trust [their the code development] to AI - even [if] there's a new AI system or AI tool to do code review for you, I think that will increase more [the] risk on... The code that you deliver [using AI tools in this way] maybe it will solve the business problem, but it won't be maintainable - [for example] when someone else tries to work on it [this code] to maybe expand or change features or add new features - I think the most cases are just about changing features, refactoring like that. And it [using AI tools in this way] increases the risk of that bringing... We already aware that we always have technical debt, and having this AI-generated code without supervision, without a solid understanding about software engineering, it will increase more the risks [of getting technical debt]. <b>And in many cases, with someone who just chunked the code from AI without that understanding, it may impact a bit later when the system is a bit more critical or more, let's say, a system inside the airplane. I think airplane is the one [case] that [it requires to] have more rigorous way to make sure that the code is also safe for humans to use it, right? I think that's... I'm not sure, I'm not working in the aircraft industry, but I think [in] that [domain] they have more rigorous ways to make sure that it's not gonna be dangerous to humans to use it.</b></p> | Not Using AI Code Without Reviewing It In Human Safety Related Domains | Responsible use Of LLMs  | Ways of using LLMs |
|                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                        | Taking Control over LLMs | Control            |
| P8             | <p>Researcher: And when you think about your challenges, is there any... suppose that your you could talk with your manager or your software leader or any anyone that can help you to support you better using LLM tools, is there anything that you would want to support you better using LLM tools? And what would be that?</p> <p>P8: Well, luckily, I think my manager here is more open, quite open to AI. I think what I might suggest for them is like: explain this to everyone in our team that AI here [should be treated] as a tool, not as another entity that works for you, not another developer that does fully all the work for you. So, I think that's more how something to better support me. <b>As someone who is hired to do the work, and because that's something that I value: making sure that the system is sustainable for us. What I mean by sustainable here is [be] sustainable for developers who are working on it and maintaining it.</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Ensuring AI Code is In A Maintainable Quality for All Team Members     |                          |                    |
|                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                        | Responsible use Of LLMs  | Ways of using LLMs |

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| P3             | P3: Yeah. For me, I look at it [LLMs] as just like an extra tool that I can use on top of Googling. I wouldn't say it's [LLMs are] better than Google, not yet, at least. Because <b>the information that it provides you don't know if it's correct and I don't know where it comes from. So, every single thing that it [LLMs] outputs, I would have to sort of fact check whether it works first.</b> I would personally trust things that I see on Stack overflow a little bit more because those are written by actual software developers. And you and you can see people's comments on the topic that you're trying to look for. If I'm thinking about it now, I think ChatGPT is useful if you're just trying to go from A to B like, just give me an answer. Whereas if you're trying to Google something and learn about something, I think Googling, and looking through stack overflow forums will help you learn more because it sort of gives you a better understanding of the whole overall topic. You can see people discussing about whatever you're trying to look into. | Every AI Suggestion Needs to Be Verified If It's A Working Solution | Taking Control over LLMs | Control  |
| P7             | Researcher: Did you feel very distracted while you're programming? and [did] you feel like: "Oh, I might need to use"? I mean your 1st thought you'd be come to get help from [ChatGPT]<br><br>P7: Distracting from like learning?<br><br>Researcher: Yeah, from the thinking process [perspective].<br><br>P7: Oh, like during my thought process, did ChatGPT distract me from? Yeah, I think there were a few scenarios when yeah [I felt] ChatGPT distracted me. When I face a challenge, I like to first just sit there and brainstorm [by myself]. [But] then you [feel] tempt to ask ChatGPT [the solution], because ChatGPT gives [you] very quick answers. [But] then <b>sometimes ChatGPT will give you an answer that's completely different</b>                                                                                                                                                                                                                                                                                                                                 |                                                                     |                          |          |
| P3             | P3: Yeah. So usually when I bring up ChatGPT it's for let's say I'm trying to debug something. Oh. have a thought in my head of what my idea would be. and I think I use ChatGPT, to sort of give it my thoughts, and verify whether that's appropriate. And sometimes it goes good answers, but not always. Some other times it gives back some not correct answers. <b>So it's like my responsibility to go and filter which ones are good responses and which ones are bad.</b> I also kind of use it to sort of generate unit tests as well. I think it's good at generating unit test scenarios. So let's say, you have a specific feature you're working on. And you're gonna be able to unit test that you just type in like a prompt on ChatGPT about like this specific feature. And it sort of gives you like this <del>output of what should be tested</del>                                                                                                                                                                                                                     |                                                                     |                          |          |
| P3             | P3: I [validated the code generated by] sort of just briefly glanced through it. I guess it comes with experience like being able to tell whether something that's outputted by ChatGPT is correct or wrong. Sometimes whatever that comes out is just not related to what you want but other times it's like <b>"Oh, maybe that solution that the ChatGPT gave you might work". So, I would go and test that out and see. Now, I would manually verify whether it's a working solution.</b> And sometimes it is, and sometimes it's not.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                     |                          |          |

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| P8             | <p>Researcher: When you think about the dangers of using LLM tools.. you already mentioned about beginners developers using, can you expand your view about this?</p> <p><b>P8: Yeah. To me, that's a risk for using AI, which is: if someone is not willing to learn more on the software engineering side as... Like, someone who got a job and then [that person is] not willing to expand the mastery [of their skills] in what software engineering is about, and over-engineering, [not knowing] how to minimize software engineering, how to write better, clean and maintainable code systems; and those who do not want to do the code review and just fully trust [their code development] to AI - even [if] there's a new AI system or AI tool to do code review for you, I think that will increase more [the] risk on...</b> The code that you deliver [using AI tools in this way] maybe it will solve the business problem, but it won't be maintainable - [for example] when someone else tries to work on it [this code] to maybe expand or change features or add new features - I think the most cases are just about changing features, refactoring like that. And it [using AI tools in this way] increases the risk of that bringing... We already aware that we always have technical debt, and having this AI-generated code without supervision, without a solid understanding about software engineering, it will increase more the risks [of getting technical debt]. And in many cases, with someone who just chunked the code from AI without that understanding, it may impact a bit later when the system is</p> |      |         |          |
| P13            | <p>Researcher: And how do you view that LLMs will influence your career in the near future, and also in the long term?</p> <p><b>P13: In the near future. I don't think it'll change my career as a software engineer. We'll pretty much stay the same [in the job market]. I don't think ChatGPT or [any other] AI is going to take my job anytime soon. I think what software engineers do isn't just writing code. I think a lot of what software engineers do is designing, planning and thinking about systems. And even when I was looking into like a lot of this AI agent stuff, because that's the newest hype, the newest trend, where you can just get AI talking to each other and build a backend without even having to write any code, because all of it is written through AI. You still need someone to configure all those AI workflows and to set up the agentic AI, to set up all the LLMs. I think you still need to know what's going on under the hood. You still need someone who knows computer science</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |      |         |          |
| P13            | <p>Researcher: And if you could give some practical tips, some recommendations to people that are using LLMs, or plan to use LLMs, for software development, what recommendations you would give?</p> <p><b>P13: Always read what it [ChatGPT/LLMs] writes. Don't take everything it says [without doing a review], and if you're finding that it wastes your time, just stop using it and just write it yourself because [ChatGPT/LLMs] it's useful to save time. But if it's not saving time, just stop using it.</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |      |         |          |

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| P3             | P3: In terms of privacy, I am a bit skeptical about how they [LLM Companies] handle privacy. <b>I'm not super, I haven't really looked into how they [LLM Companies] handle confidentiality and privacy for these things.</b> I sort of just trust that they're [LLM Companies] doing their job because it's a plugin that is widely accepted by the community and I think that's good enough for me. As a software developer that's just doing their job. As long as the company doesn't have a policy that says you can't use it, I think I'm okay.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Unaware of LLMs Privacy Policy                         | Losing Control over LLMs  |                    |
|                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                        | Irresponsible use of LLMs | Ways of using LLMs |
| P6             | Researcher: The question is about the activities you feel most comfortable doing, for example, debugging, situations where you face a challenge that you have to fix something here. What would your attitude be when faced with a problem in the code? Would you generally use ChatGPT first, or would you prefer to have more human support from your coworkers, developers?<br>P6: Normally, for more specific queries, but not necessarily debugging, correcting a line, but I think that for things more focused on programming logic, I usually go straight to ChatGPT, because normally it can always provide this support. When I think about something more structural in terms of architecture, conventions, tables, creating DAGs. <b>ChatGPT can provide support, but I think there's almost always a relationship. For example, I'm a mid-level [data engineer] and we have a senior. My senior will have a much richer and more powerful background to be able to answer my question, or remove my impediment, for example. So I use ChatGPT up to certain levels of development.</b> When it's something simpler, much more logic-oriented, I usually feel more comfortable using it. And it [ChatGPT] almost always manages to meet what I'm asking for. However, it's at those times, <b>when it's something more robust, that I go and ask for help from other people, from other areas, senior people.</b> | Relying on Discussions with Peers for Complex Problems | Reliance on Colleagues    | Reliance           |
| P3             | P3: Right now it's pretty okay if you're trying to solve a small problem. A lot of times, ChatGPT can handle small bite size problems. But if you're trying to solve, let's say, coming up with an architecture for your software, <b>I don't think ChatGPT is good enough to be able to come up with a full stack software architecture solution. I think that's where actual software engineers come in and discuss with each other on what's feasible,</b> rather than relying on ChatGPT to give you the answer.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                        |                           |                    |
| P6             | P6: Because normally, when we tend to have something - at least for me, in my area, in my day-to-day life. <b>When we have a question that goes up in terms of difficulty, scope, and architecture, involving planning as a whole,</b> I feel there are two problems. Firstly, there's the communication problem. I can't explain the whole robust part so that he has the basis to be able to answer me. And because of this difficulty, of not being able to express myself, I feel that he can't be aware of everything I need and be able to give me an answer. You know, I think it's a lot about communication, about me being able to tell him everything I need. Normally I can only explain... It's very much down to human language as to how to translate that. I think [the challenge] is very much in this communication part of expressing the difficulty [you're facing]. <b>When you go up a level, I think that only real communication, human interaction, can solve it, so you have to share the screen with the other person, asking for help: "Help me solve this".</b>                                                                                                                                                                                                                                                                                                                                  |                                                        |                           |                    |

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| P7             | <p>Researcher: And have you ever thought about the risks and dangers of using ChatGPT?</p> <p>P7: Like risks to me, or risks to society?</p> <p>Researcher: For you, and in general. I mean, not just for you, but in general.</p> <p>P7: Oh, I feel sometimes, if I had ChatGPT from [my] 1st year of uni, I would have relied on it too much, [so] that it [reliance on ChatGPT] would prevent my coding skills from growing. I would rely on it too much, which would risk my learning process, I guess. I think that can be applied [as a danger] in general as well. I think [there were a] lot of students in my course [that] who used ChatGPT even for assignments. And I think: “Yeah, they end up learning less of [what] they're actually meant to learn through coding it by yourself, or brainstorming by themselves”. But [at the same time] <b>it's convenient [to rely on ChatGPT] for tasks. And if you actually study what the answer [involves], that it gives you afterwards.</b> But if you're getting chased by time, and if you're using it just for the sake of getting an answer, then I think it might be a risk.</p> | relianceOnChatGPTAsSomethingConvenient | Overreliance on LLMs     | Reliance |
|                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                        | Losing Control over LLMs | Control  |