

QUESTIONS (Round 1)	TIME
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First of all, let us discuss your experience using LLMs...

1) In the pre-interview question, you mentioned using LLMs in general for <X months/years>. Please can you tell me briefly which LLMs have you been using, and for what? <ul style="list-style-type: none"> What has been your experience using <name LLMs they identify>? Ex ¹ .: OpenAI ChatGPT; GitHub Copilot; Amazon Codewhisper; Google Gemini Ex ² .: seek relevant information; write email; summarise information Ex3: my friends use, so I decide to try; my company decide to use, so I was push to use; I thought that people who use LLMs are in the technological edge (up to date) comparing others who doesn't use	3 mins
2) You also mentioned using LLMs for software development tasks. Can you expand on this? (prompts: which LLMs? for what taks?) <ul style="list-style-type: none"> What has been your experience using <name LLMs they identify>? Ex1.: seeking information on programming-related questions, clarifying confusing code, refactoring code to adopt design pattern;Generate boilerplate code, explain code, debugging, write documentation, improve code performance, refactoring code to adopt design pattern	3 mins
3) Can you list development tasks that you felt more comfortable relying on LLMs than in the senior developers in your team? What made you more comfortable? Ex.: avoid bother colleagues; worry about being judged by 'dumb' questions	3 mins
4) Think of a time you were using <LLM name> for one of these development related tasks you mentioned and end up in an unexpected outcome . [give them time to think] <ul style="list-style-type: none"> Can you share the experience? [prompts: What was the task you were trying to do? How were you using the LLM? What happened that surprised you?] Why was it unexpected? Ex.: The response was unrelated to my question/prompt	3 mins

Now, I will ask you questions to get your perspective based on your experience as a software developer

5) Based on your experiences so far, what do you find are some of the advantages of using LLMs for software development tasks? Share some examples. [prompts: name which LLM; which task; what were they trying to do; what was the limitation; why was it a advantage, e.g., compared to what] Ex.: friendly and personalised user experience - human-like interaction; Improvement on productivity/boost productivity by looking through multiple websites - similar to Googling without need to filter. LLM doing pair programming (AI pair programming);	3 mins
6) What limitations have you come across? Please share examples. [prompts: name which LLM; which task; what were they trying to do; what was the limitation; why was it a limitation?] Ex.: user experience issues; integration with current development softwares; lack of knowledge of internal APIs	3 mins

<p>7) What do you find challenging about using LLMs for software development tasks? Share some examples. [prompts: name which LLM; which task; what were they trying to do; what was the limitation; why was it a challenge?]</p> <ul style="list-style-type: none"> Was there a time you felt concerned or less confident about using LLM-based tools in your software projects? If so, could you describe these situations? <p>Ex¹.: Get distracted or biased by wrong and poor quality suggestions</p> <p>Ex².: authorship of the code generated with LLM support; over-reliance on the LLMs, lack of validation or accuracy, privacy issues, or ethical issues like gender or discrimination-biased responses, decline in code understanding;</p>	3 mins
<p>8) <i>OPTIONAL</i>: Based on the number of prompts per day <mention number> mentioned in the pre-interview questionnaire, do you feel that it impacts on your skills development? If so, how?</p> <p>Ex.: difficulty in remembering the commands because I've been relying on ChatGPT</p>	3 mins
<p>9) <i>OPTIONAL</i>: It seems there is/is no policy at your organisation regarding the use of LLMs for software development tasks. Can you share more about this [Prompts: when was it introduced? By who? Do you know how it was developed/by who?]</p> <ul style="list-style-type: none"> What do you think prompted them to introduce a policy? Has it affected you or your team? If so, has it been a help or a hindrance? How? <p>Ex.: be careful about putting property code into the prompt - data leaking; don't use LLMs in the development of new features - only tests or debugging</p>	3 mins
<p>10) These are your responses to one of the questions in the pre-interview questionnaire [Show - AI attitude responses (don't have to name it) - fear/trust/destroy/benefit/job losses].</p> <p>[Pick strongest responses]</p> <p>Can you tell me more about X.</p> <ul style="list-style-type: none"> Why do you think this way? What role do you see LLMs playing in software development in the near future? 	3 mins
<p>11) <i>OPTIONAL</i>: Based on your experience, how can LLMs influence the developers' career trajectory: from education and training period to passing through seniority levels (e.g., juniors, seniors)?</p> <ul style="list-style-type: none"> And in job market competitiveness? 	3 mins
<p>12) If you could share some practical tips with other software professionals about using LLMs in development related tasks, what would you share?</p>	3 mins
<p>13) If you could share some recommendations with team leaders, managers, or companies as a whole about better supporting developers, what would you share?</p> <p>Ex.: establish guidelines for usage of LLMs; upscaling/reskilling; Provide up-to-date LLM-based tools (e.g., ChatGPT 4) mitigates problems in old versions (e.g., ChatGPT 3.5)</p>	3 mins

To conclude,

14) Is there anything else you would like to share about this topic or our study in general?	1 min
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TOTAL (ROUND 1) - With Optional questions	40 mins
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QUESTIONS (Round 2)	TIME
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First of all, let us discuss your experience using LLMs...

<p>[NO CHANGES]</p> <p>1) In the pre-interview question, you mentioned using LLMs in general for <X months/years>. Please can you tell me briefly which LLMs have you been using, and for what?</p> <ul style="list-style-type: none"> What has been your experience using <name LLMs they identify>? <p>Ex¹.: OpenAI ChatGPT; GitHub Copilot; Amazon Codewhisper; Google Gemini</p> <p>Ex².: seek relevant information; write email; summarise information</p> <p>Ex³: my friends use, so I decide to try; my company decide to use, so I was push to use; I thought that people who use LLMs are in the technological edge (up to date) comparing others who doesn't use</p>	3 mins
<p>[NO CHANGES]</p> <p>2) You also mentioned using LLMs for software development tasks. Can you expand on this? (prompts: which LLMs? for what tasks?)</p> <ul style="list-style-type: none"> What has been your experience using <name LLMs they identify>? <p>Ex¹.: seeking information on programming-related questions, clarifying confusing code, refactoring code to adopt design pattern; Generate boilerplate code, explain code, debugging, write documentation, improve code performance, refactoring code to adopt design pattern</p>	3 mins
<p>[NO CHANGES]</p> <p>3) Can you list development tasks that you felt more comfortable relying on LLMs than on the senior developers in your team? What made you more comfortable?</p> <p>Ex.: avoid bother colleagues; worry about being judged by 'dumb' questions</p> <p>[QUESTION ADAPTATION FOR SENIOR DEVS]</p> <p>3) Can you list development tasks that you felt more comfortable relying on LLMs than on colleagues in your team? What made you more comfortable?</p> <p>Ex.: avoid bother colleagues; worry about being judged by 'dumb' questions</p>	3 mins
<p>[ORIGINAL NUMBER: 10]</p> <p>4) These are your responses to one of the questions in the pre-interview questionnaire. [Show AI attitude response: fear/trust/destroy/benefit/job losses]</p> <p>[Pick extreme responses: Strongly disagree (1/5) or Strongly agree (5/5)]</p> <p>Can you tell me more about X.</p> <ul style="list-style-type: none"> Why do you think this way? 	

<ul style="list-style-type: none"> ○ What role do you see LLMs playing in software development in the near future? 	
<p>[ORIGINAL NUMBER: 4]</p> <p>5) Think of a time you were using <LLM name> for one of these development related tasks you mentioned and you were surprised. [give them time to think]</p> <ul style="list-style-type: none"> ○ Can you share the experience? <i>[prompts: What was the task you were trying to do? How were you using the LLM? What happened that surprised you?]</i> ○ Why was it unexpected? <p>Ex.: The response was unrelated to my question/prompt</p>	3 mins

Now, I will ask you questions to get your perspective based on your experience as a software developer

<p>[ORIGINAL NUMBER: 5]</p> <p>6) Based on your experiences so far, what do you find are some of the advantages of using LLMs for software development tasks? Share some examples. [prompts: name which LLM; which task; what were they trying to do; what was the limitation; why was it a advantage, e.g., compared to what]</p> <p>Ex.: friendly and personalised user experience - human-like interaction; Improvement on productivity/boost productivity by looking through multiple websites - similar to Googling without need to filter. LLM doing pair programming (AI pair programming);</p>	3 mins
<p>[ORIGINAL NUMBER: 6]</p> <p>7) What do you find challenging about using LLMs for software development tasks? Share some examples. [prompts: name which LLM; which task; what were they trying to do; what was the limitation; why was it a challenge?]</p> <ul style="list-style-type: none"> ○ Was there a time you felt concerned or less confident about using LLM-based tools in your software projects? If so, could you describe these situations? <p>Ex¹.: Get distracted or biased by wrong and poor quality suggestions</p> <p>Ex².: authorship of the code generated with LLM support; over-reliance on the LLMs, lack of validation or accuracy, privacy issues, or ethical issues like gender or discrimination-biased responses, decline in code understanding;</p>	3 mins
<p>[ORIGINAL NUMBER: 7]</p> <p>8) <i>Optional</i>: What limitations have you come across? Please share examples. [prompts: name which LLM; which task; what were they trying to do; what was the limitation; why was it a limitation?]</p> <p>Ex.: user experience issues; integration with current development softwares; lack of knowledge of internal APIs</p>	3 mins
<p>[NEW QUESTION]</p> <p>9) <i>OPTIONAL</i>: What are the risks/dangers of using GenAI tools? Share some examples.</p> <p>Ex.: difficulty in remembering the commands because I've been relying on ChatGPT</p>	3 mins
<p>[NEW QUESTION - FOR SENIORS]</p> <p>9.5) Did you observe any difference in your colleague's behaviour after they also adopted LLMs? And in junior developers' behaviour?</p>	

Ex.: Nowadays, junior developers seek less help than before.	
<p>[ORIGINAL NUMBER: 13]</p> <p>10) If you could get your company, manager, or team leader to do something to better support you as a developer regarding LLM adoption, what would that be?</p> <p>Ex.: establish guidelines for usage of LLMs; upscaling/reskilling; Provide up-to-date LLM-based tools (e.g., ChatGPT 4) mitigates problems in old versions (e.g., ChatGPT 3.5)</p>	3 mins
<p>[ORIGINAL NUMBER: 12]</p> <p>11) If you could share some practical tips with other junior software professionals about using LLMs in development related tasks, what would you share?</p>	3 mins
<p>[ORIGINAL NUMBER: 11]</p> <p>12) <i>OPTIONAL</i>: Based on your experience, how can LLMs influence the developers' career trajectory: from education and training period to passing through seniority levels (e.g., juniors, seniors)?</p> <ul style="list-style-type: none"> • And in job market competitiveness? 	3 mins
<p>[NEW QUESTION ✨]</p> <p>13) <i>OPTIONAL</i>: Based on your experience of using LLMs in software development, how do you think LLMs may influence your career as a software developer in the near future? (what would be near future for you?)</p> <p>And in the long term? (What is long-term for you?)</p>	3 mins
<p>[ORIGINAL NUMBER: 9]</p> <p>14) <i>OPTIONAL</i>: According to your response to PIQ, there is/is no policy at your organisation regarding the use of LLMs for software development tasks. Can you share more about this [Prompts: when was it introduced? By who? Do you know how it was developed/by who?]</p> <ul style="list-style-type: none"> ○ What do you think prompted them to introduce a policy? ○ Has it affected you or your team? If so, has it been a help or a hindrance? How? ○ Do you think policies are useful or useless? Why? (give examples) <p>Ex.: be careful about putting property code into the prompt - data leaking; don't use LLMs in the development of new features - only tests or debugging</p>	3 mins

To conclude,

<p>[ORIGINAL NUMBER: 14]</p> <p>15) Is there anything else you would like to share about this topic or our study in general?</p>	1 min
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TOTAL (ROUND 2) - With Optional questions	43 min
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QUESTIONS (Round 3)	TIME
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Let us discuss your experience using LLMs...

<p>[ORIGINAL NUMBER: 2]</p> <p>1) You also mentioned using LLMs for software development tasks. Can you expand on this? (prompts: which LLMs? for what tasks?)</p> <p>a) What has been your experience using <name LLMs they identify>?</p> <p>Ex1.: seeking information on programming-related questions, clarifying confusing code, refactoring code to adopt design pattern; Generate boilerplate code, explain code, debugging, write documentation, improve code performance, refactoring code to adopt design pattern</p>	3 mins
<p>[ORIGINAL NUMBER: 3]</p> <p>2) Can you list development tasks that you felt more comfortable relying on LLMs than in the senior developers in your team? What made you more comfortable?</p> <p>Ex.: avoid bother colleagues; worry about being judged by 'dumb' questions</p>	3 mins
<p>[NEW QUESTION]</p> <p>3) Are there any tasks you feel comfortable fully delegating to LLMs? Why?</p> <p>Ex.: Boilerplate code generation, document generation</p>	3 mins
<p>[NEW QUESTION]</p> <p>4) And when it comes to your relationship with your team, how do you view that LLMs influence you in your integration with those other colleagues?</p>	3 mins
<p>[ORIGINAL NUMBER: 9]</p> <p>5) What are the risks/dangers of using GenAI tools?</p>	3 mins
<p>[NEW QUESTION]</p> <p>6) How do LLMs impact developers' career reputation?</p>	3 mins
<p>[NEW QUESTION]</p> <p>7) When it comes to the organisational level, how do you view the benefits of LLMs in terms of cost saving?</p>	3 mins
<p>[NEW QUESTION]</p> <p>8) How do you view the cost of using LLMs?</p>	3 mins
<p>[NEW QUESTION]</p> <p>9) Do you notice any change in your personality due to LLMs?</p> <p>Ex.: Became impatient or lazy</p>	3 mins
<p>[ORIGINAL NUMBER: 11]</p> <p>10) What would be your recommendations to the new generation of software developers regarding LLMs?</p>	3 mins
<p>[ORIGINAL NUMBER: 13]</p> <p>11) In your experience, how do you view that LLMs influenced your career in the near future and in the long term?</p>	3 min
<p>12) How do LLMs impact society? Job market?</p>	3 mins

To conclude,

[ORIGINAL NUMBER: 15] 15) Is there anything else you would like to share about this topic or our study in general?	1 min
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TOTAL (ROUND 2) - With Optional questions	37 min
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