

## Week 2 Quiz 1

1. Which of the following software development tasks can an LLM assist with? Select all correct answers.

- Writing documentation

*LLMs are able to use the artificial understanding of programming they developed in their training to analyze code, understand its intent, and write useful comments to explain how it works.*

- Debugging errors

*LLMs are able to use the artificial understanding of programming they developed in their training to understand the error messages produced by compilers or interpreters, analyze the code that produces the errors, and suggest edits to fix the code.*

- Managing dependencies

*LLMs have learned the history of packages and updates from text from the internet, and so can analyze code and suggest updates or identify incompatible versions to assist in dependency management.*

- Suggesting packages or algorithms to use to complete a task.

*LLMs have encoded broad understanding of computer science and programming languages during their training, and can therefore suggest packages or algorithms that can solve a particular task or problem.*

2. How could you use your expertise as a software developer to improve the following prompt? "Write a C# function to find the square root of a number?"

- Ask for a method rather than a function since this is the language-specific terminology that C# uses

- Provide the model with the assembly code required to complete this task
- Define square root for the LLM
- Include the number that you want to find the square root of in the prompt

3. You are building a data visualization dashboard in Python and working with an LLM to implement to code. Your first attempt at a prompt is the following:

*"Write code for a data dashboard in Python."*

Which of the following details could you add to your prompt to improve the output of your pair-coding work? Select all correct answers.

- Including a sample of the data you want to visualize

*Giving context to the LLM about the data you will be working with will help it write code specifically for your dataset.*

- Sharing your personal password for accessing the backend database with the LLM

- Letting the LLM know which web framework you want to use

*Providing specific details about which software packages and libraries you want to use will always help the LLM write code that is specific to your needs.*

- Providing a detailed description of what you would like the dashboard charts to look like

*LLMs can take descriptions of charts, like colors and shapes to use, chart type, font size etc., and implement them in code.*

4. You can trust that the code generated by an LLM will always work exactly as you want it to.

- True
- False

*LLM-generated code can include many errors, like hallucinated parameter values, using deprecated libraries, or carrying out a slightly different procedure than you intended. You should always test generated code thoroughly to confirm that it behaves as you expect before sharing with others or using it in production.*

5. You are working with an LLM to develop an algorithm to calculate the moving average of a company's stock price over time. The code that the LLM generates after your initial prompt doesn't include any error handling. What should you do to get the LLM to include error handling in the code? Select all correct answers.

- Start a new chat with a smarter LLM and try your prompt again
- Hit the "try again" button on the chatbot interface to resend your prompt and see if the model will include error handling
- Follow up with a description of the type of error you'd like to handle, for example missing data.

*Describing the kind of error you'd like to handle will help the model write the required error handling code for you.*

- Follow up with a clear instruction to include error handling in the code

*Providing really specific instructions in your follow-up feedback will help the LLM write the code that you want with the error handling included.*