Institute of Data

Software Engineering

AI Tools   Software Engineering

Using AI Tools (e.g. ChatGPT)

AI tools such as ChatGPT have recently emerged as an extremely productive for their usability, (mostly) relevant answering and interactivity as chatbots over a wide range of areas.

Their usage is encouraged in this course as a time-saver and productivity-enhancer. However if you are copying text or code from there, please make sure you:
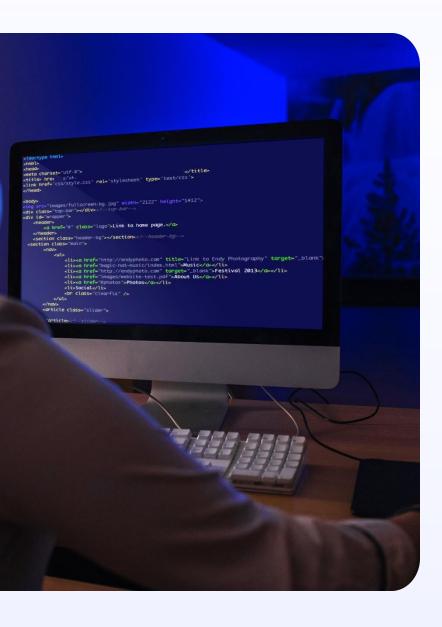
Acknowledge the source in your comments

Thoroughly understand what the code is doing and how it works - if not, ask ChatGPT (or your trainers) to explain it and simplify as needed

Use it more as a tool to enhance, fix or add particular features to your application, not for entire projects

Use cases

- ❖ Code generation with detailed comments (do still need to understand the code and verify that the code works as intended)

- ❖ Question-answering (including follow-up questions to explain things more simply if needed)

- ❖ Summarising text

- ❖ Translate text from one language to another (including programming languages)

- ❖ Writing emails, cover letters, resumes

- ❖ Checking grammar and spelling

- ❖ Troubleshooting – advice on how to debug code and install software

Limitations of AI Bots

❖ The bots are far from sentient, they are trained on large datasets of text data from the internet

❖ Content generated may display some of the biases and stereotypes seen on the internet

❖ Unoriginal or repetitive content may be generated

❖ They may lack common sense information that is absent from the training dataset

❖ As of early 2025 they are relatively poor in solving advanced mathematics problems

❖ They may not be useful for information about recent events if the training set is not up-to-date