

Information on the usage of AI-based tools in writing of theses at the Faculty for Physics and Astronomy (revised 25.Sep.2023)

Bachelor- and Master-theses at the Faculty of Physics and Astronomy in Heidelberg are theses in a scientific discipline and need to conform to the rules of good scientific practice. In particular, the integrity of data and authorship have to be ensured, and all means used in writing the thesis must be declared.

Below there is a collection of **examples** of possible uses of AI-based tools along with a recommendation for safeguarding the integrity of the thesis document (<https://www.uni-heidelberg.de/en/university/about-the-university/good-academic-practice>).

action	classification/possible issue	Recommended way of proceeding
Summaries of scientific articles by ChatGPT in thesis preparation	Possible overlooking of important points or connections	Manual checking of the summary, referencing and declaration in the thesis
Generation of pictures by DALL-E	Forgery of data	Statement about the symbolic value of the picture in the caption, declaration of the software used
Writing sections with ChatGPT	Appropriation of text and authorship, possible false statements	Referencing, possibly marking as verbatim quote, declaration in the thesis
Writing sections with ChatGPT with manual editing of single words	Appropriation of text and authorship, possible false statements	Referencing, possibly marking as verbatim quote, declaration in the thesis
Writing code with ChatGPT	Appropriation of code developments, possible malfunction of the algorithm	Referencing and declaration in the thesis
Finding references with ChatGPT	Wrong citations, incomplete citations	Manual checking of all references
Solving integrals with WolframAlpha or Mathematica	Close to the triviality threshold	Declaration of Mathematica as a tool, citation of an integral table
Usage of DeepL for translation of individual words	Below the triviality threshold	No action necessary
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figures of speech