

Assignment 5

With point of departure in Chapter 6 in Hands-on Generative AI with Transformers and Diffusion Models, carefully fine-tune mistralai/Mistral-7B-v0.3 while manipulating key hyperparameters. For your best model, present the training-validation plot and completions for the prompts below:

```
prompts = [
    "What is the capital of Germany? Explain why that's the case and if it was different in the past?",
    "Write a Python function to calculate the factorial of a number.",
    "A rectangular garden has a length of 25 feet and a width of 15 feet. If you want to build a fence around the entire garden, how many feet of fencing will you need?",
    "What is the difference between a fruit and a vegetable? Give examples of each.",
]
```

Attach your Jupyter notebook as an appendix. Include only code relevant to solving the problems.