Homework Assignment 4

1. Reading summary (6 points)

Please summarize the reading material in your own words. This exercise will help you comprehend the main objectives in the reading besides the technical details. Your summary should consist of three parts:

1. One-sentence summary
2. One-paragraph summary
3. Half-page summary

2. Questions (4 points)

Please select **Three** questions to answer from the following list, and write down **one** question that you have about reading material. Your question can be about a specific concept that is difficult to understand, a line of confusion, or something you would like to learn more about.

Section 1:

- What are the detrimental effects of limited posterior approximations?
- Explain the meaning of the Evidence Lower Bound (ELBO) and its components.

Section 2:

- How does the proposed Deep Latent Gaussian Model (DLGM) work?

Section 3:

- Why is the computation of logdetJacobian terms not required when h(z) does not depend on qK?

Section 4:

- What are the differences between planar flows and radial flows?
- How do general normalizing flows and volume-preserving flows handle the Jacobian?

Section 5:

- What is Non-linear Independent Component Estimation?

Section 6:

- Can you explain what is happening in Figure 3 (a), (b), and (c)?